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PIZARRO DESCRIBING TO THE EMPEROR, CHARLES V,
THE RICHES OF PERU

From the painting by Lizcano

Page 24

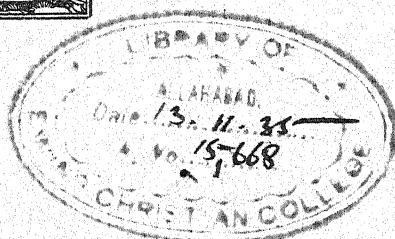
HEROES OF EXPLORATION

BY

ALFRED J. KER

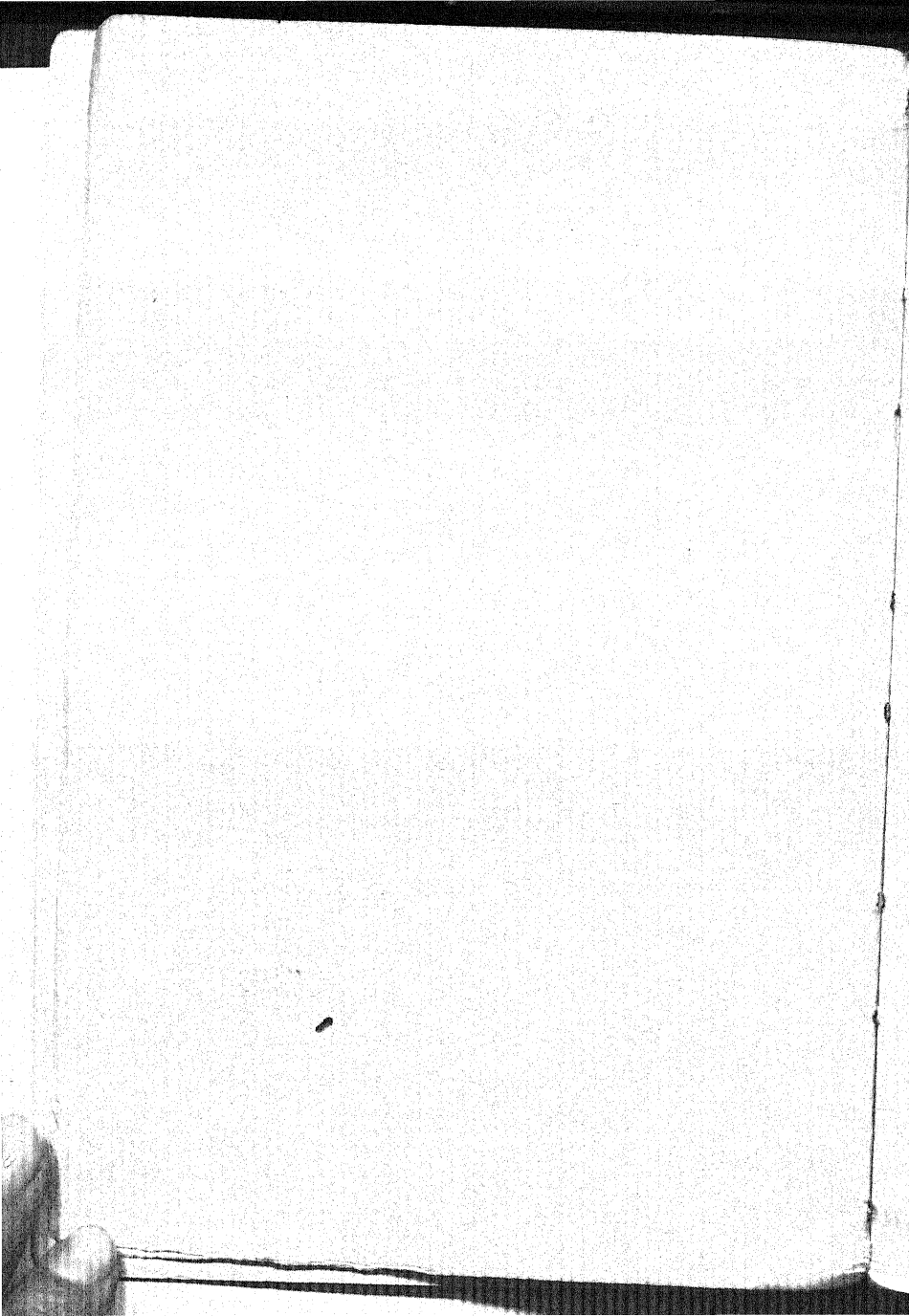
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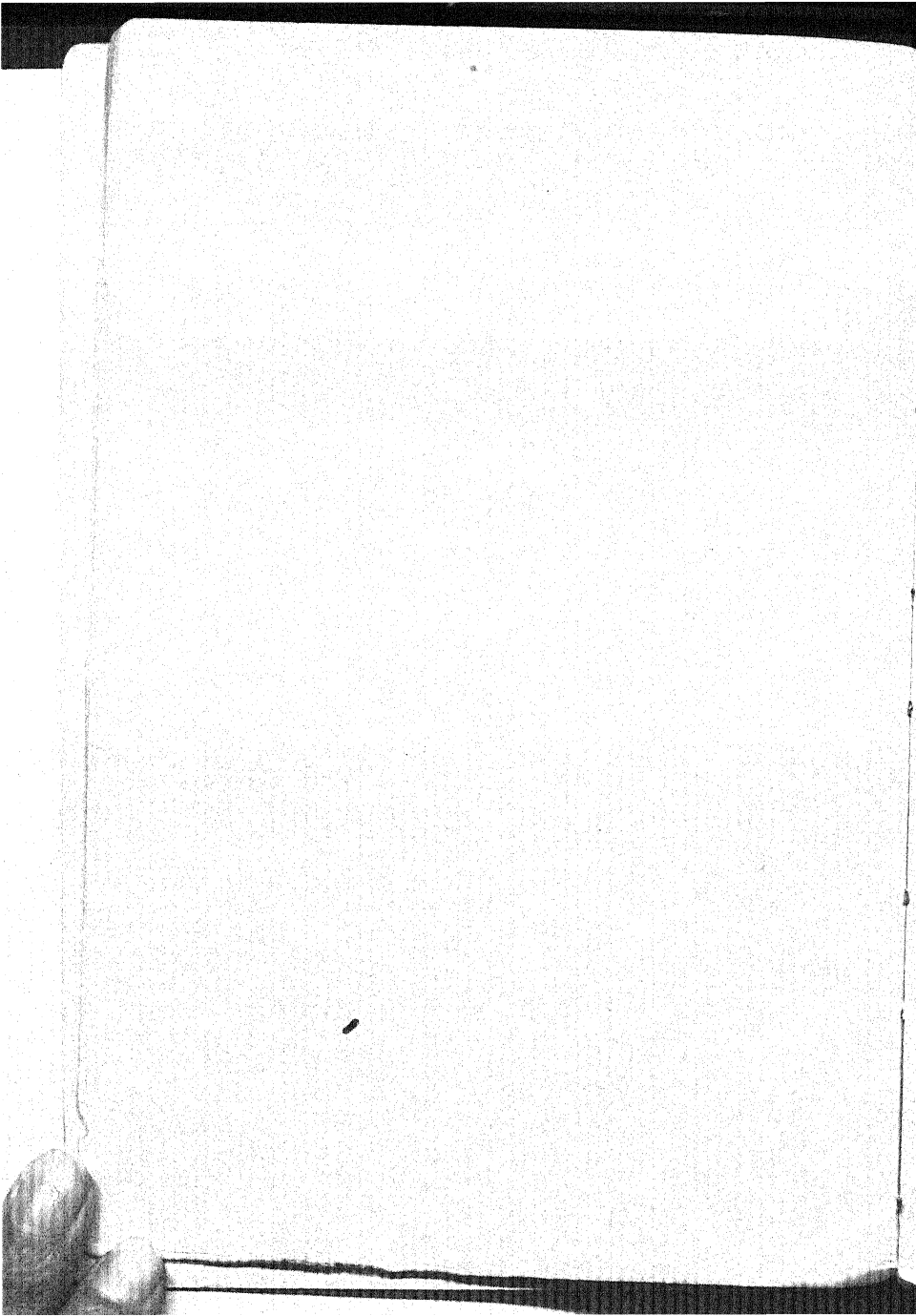


PREFACE

The following stories of great explorers will, it is hoped, provide interesting and instructive reading. The arrangement is chronological, and the stories have been so selected as to deal with journeys in all parts of the world. The illustrative maps will enable the reader to study the routes intelligently, and by this means much incidental geographical knowledge may be acquired. For the main facts of the more recent journeys, viz. those of De Windt, Nansen, Sven Hedin, Scott, &c., the authors wish to express their indebtedness to the following works: *From Paris to New York by Land*; *First Crossing of Greenland and Farthest North*; *Through Central Asia and Tibet*; and *The Voyage of the Discovery*; also to Messrs. Longmans, Green & Co., for permission to use the illustration "Nansen crossing Greenland", and to the *Illustrated London News* for "Rescue of One of the Party from a Crevasse".

A. J. K.

C. H. C.



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HEROES OF EXPLORATION

The Discovery of Peru

A little more than four hundred years ago the imaginations of men were stirred by the news of the discovery of a wonderful country lying some 3000 miles to the west of Europe. The stories of the fabulous wealth to be obtained, brought back by the earliest visitors to this new land, roused men of all classes in the Old World to the highest pitch of excitement. Men spoke of rivers on whose banks diamonds were as common as pebbles, and of mountains of pure gold; of cities whose streets were paved with silver and gold, and whose every native was bedecked with ornaments worth a king's ransom. Such were the stories poured into the ears of eager listeners in the seaport towns of Spain, of Portugal, and of England. As we now know, there was a certain amount of truth in them, with a very great deal of exaggeration. Many an adventurer, drawn to this El Dorado of the West by the hope of untold riches, was cruelly disappointed.

Of this new country, America, the people of Europe

might have remained in ignorance for many years longer had it not been for the desire of merchants to find a sea passage to the East Indies and India. The fame of Eastern riches and treasures was then as great as that of America was destined to be later. And so, by looking for a sea route to one country of fabled gold and precious stones, another land of even greater attraction was discovered.

In the year 1501 there started from Spain for the New World a man named Balboa. He became a planter in the Island of San Domingo. But as a planter he was not successful. One day, while turning over in his mind the strange rumours which floated to him from the southern mainland, rumours of gold, of silver, and of diamonds, he suddenly decided that he would leave the island and join the ranks of the fortune hunters in the south. But, unfortunately for his purpose, he had no money; indeed he was in debt. But he was not in the habit of letting obstacles hinder him from doing what he had a mind to do, so he resolved to go as what we should nowadays call a "stowaway". The story is told that late one night he went down to the quay and hid himself in a barrel, which next morning was duly rolled aboard a ship with Balboa inside. He kept close in the hold until the vessel was well out to sea; then, knowing that a port on the Gulf of Darien was the first place of call, he crept from his hiding place.

A few years later we find Balboa as the leader of an expedition across the narrow isthmus joining North and South America. Associated with him in this enterprise was a man around whose name the story of Spanish dis-

coveries and conquests in South America chiefly centres. This man was Francisco Pizarro. He was a rugged, unlearned, daring adventurer from Spain. His childhood's days had been most unhappy, and, being an ambitious lad, he had quickly grown tired of the monotonous occupation of tending swine in return for food and shelter. To him had come stories of the wonderful country lying on the other side of the western ocean, and he had been fired with the desire to seek fortune and fame in this new land. To what extent that desire was satisfied the following pages will partly show.

As the gallant commander, Balboa, and his subordinate, Pizarro, made their way across the isthmus the minds of both were filled with stories they had heard of a country fabulously rich in gold, lying somewhere to the south. The journey was not long, but it was perilous and exhausting. The progress was hindered by low-lying, unhealthy swamps, by deep ravines, and by precipitous mountains. But the isthmus was crossed at last, and stretching away to the south they saw a vast ocean, the Pacific, upon which no European had yet gazed. And as they looked they both longed to brave the perils of those unknown waters in quest of this country of incredible wealth.

This expedition took place in the year 1513. It was not till eleven years later that Pizarro, now a man of fifty, was able to sail from Panama on his first voyage to the south. The equipping of the expedition was no light task. The first essential was money. To obtain this Pizarro entered into an agreement with two men: Almagro, a Spanish soldier, who was as enthusiastic

over the enterprise as Pizarro himself, and a Spanish church dignitary of Panama. The second of these made himself responsible for the greater part of the funds. But the finding of suitable men proved much more difficult. In Panama at this time there were many unfortunate adventurers who Pizarro thought would be only too eager to seize this chance of gain to themselves. But they were suspicious. They had seen other expeditions set out with just as fair a chance of success as this one; and where were the gallant fellows now who had volunteered for those? How were they to know that Pizarro's enterprise would not be equally disastrous? At last, however, by much reasoning and many fair promises, about a hundred men were secured; and on 24th November, 1524, Pizarro set sail from Panama. Almagro was to follow later in a smaller vessel so soon as he could make her ready for sea.

There is little to tell in the nature of actual discoveries made by Pizarro on this first expedition. After calling at the Isle of Pearls, lying south-east of Panama, he crept along the coast, keeping a careful lookout for any sign of Indian habitation on the mainland. Off the mouth of a small river he anchored and made a short tour of inspection inland. The ground at first was swampy and treacherous. Beyond this marshy tract lay a belt of forest where the undergrowth was so dense that only by labouring with axes and knives could they make the least progress. They found no traces, however, of gold or of Indians; so Pizarro left the desolate spot and sailed on southwards. A few days later he was overtaken by a terrible storm, and for more than a week his small

craft was tossed about helplessly at the mercy of the tempest. The storm having subsided, Pizarro found himself faced by a new danger. Their small stock of provisions was nearly exhausted; and he was compelled to put in to shore to replenish his water supply and to search for any food that the forests might afford.

Their plight was, indeed, a sorry one. The air seemed poisoned by the stagnant pools. They found berries in the woods, and in their half-famished condition ate freely of them, only to be attacked immediately afterwards by distressing pains and sickness. In view of the critical nature of their position Pizarro saw that something must be done at once; he therefore sent the ship back, with about half of the company, to the Isle of Pearls for provisions. To those who were left behind on this unknown coast the weeks of waiting till the vessel returned must have been a terrible experience. Pizarro cared for the sick, shared his food with the most needy, and by every means in his power endeavoured to banish the despair which was laying hold of every member of his little band.

One incident, however, during this period served to bring some cheer to them. Pizarro, with a few of his men, was one day making an excursion inland. They had got some distance from their camp, and were thinking of returning, when suddenly, on emerging from a dense cluster of trees and matted undergrowth, they saw before them a native village. No sooner did the Indians catch sight of Pizarro than they fled. The Spaniards went forward cautiously, and within some of the huts they found, much to their joy, maize and coconuts. But the

natives had not gone far. They were watching the movements of their strange visitors from the edge of the clearing. Pizarro made signs of friendliness, and presently one of the boldest of the Indians came slowly towards him. And on the arms and legs of this native the Spaniards saw crude and heavy ornaments of pure gold. The haziness of report had at last given place to something tangible. Here, before their very eyes, was unmistakable evidence that the El Dorado of their dreams could not be far distant.

After an absence of six weeks the vessel returned, those on board scarcely recognizing their old companions, so pitilessly had famine, fever, and exposure left their marks upon them. Death, too, had thinned their ranks.

Pizarro again set sail, steering a southward course. Gradually the character of the coast changed. It became less desolate, and the signs of Indian habitation grew more frequent. While exploring inland at one place where the openings in the mangrove swamps had led him to suspect the presence of a village, Pizarro came upon an Indian town, much larger than any settlement he had hitherto seen. He sent forward an officer with a few soldiers to try to get into touch with the natives, who, as usual, had fled at his approach. These Indians were warriors, however, and when they saw that Pizarro's force was divided, they fell upon the small advancing party with fierce yells. Although the Spaniards were completely taken by surprise by this hostile reception they succeeded in driving back the Indians, but not before two of their number had been killed. The natives

had been driven back, but they were not dismayed; and while Pizarro was waiting in the deserted town, wondering at the long absence of his subordinate, he and his company were suddenly assailed by a cloud of arrows and poisoned darts. So numerous were the Indians that the Spaniards were forced to draw back slowly towards the coast, fighting as they retreated. The Indians, quick to perceive that Pizarro was the leader, endeavoured by every means in their power to slay him. He was wounded in several places. Once he stumbled and fell, and a wild shout of triumph went up from the assailants. But Pizarro sprang quickly to his feet again and kept them off till his countrymen came to his aid. At this critical moment the other party of Spaniards appeared, and after a fierce encounter the Indians were put to flight. But it was a dearly bought victory for Pizarro. Five of his men had been killed and many more wounded.

Success was not to be his on this expedition. The voyage had begun badly, for he had started at the worst season of the year. Disasters had pursued him. His ship was badly in need of repair; and this last encounter with the natives had taught him that if he hoped ever to reach Peru he must be prepared for hostilities by having more men at his command and a larger supply of arms and ammunition. And so, while still to the north of the River San Juan, he was reluctantly compelled to return to Panama. His associate, Almagro, who had started some time after him, got as far south as the San Juan, from which point, having seen nothing of Pizarro, he too returned.

The second expedition to Peru was of a more ambi-

tious character than the first. Two vessels were fitted out, and with far greater foresight than on the former occasion. A greater number of men were engaged, and more attention was paid to armour and to weapons. A pilot was also engaged. This was a Spanish sailor named Bartholomew Ruiz, a capable navigator, who had had a wide experience in this part of the world.

Less than two years after the start of the first expedition Pizarro sailed from Panama on his second attempt to discover Peru. This time he kept farther off from the coast, making no call till he arrived at the mouth of the San Juan, the point reached by Almagro some months previously. Here he cast anchor, and the following plan was decided upon. Almagro was to return with one of the ships for reinforcements; Ruiz was to proceed southward in the other vessel, and bring back a report on the nature of the coast; while Pizarro was to stay on the mainland and explore the country in the vicinity of the San Juan. Before the parties separated they surprised a small Indian village, and carried off some of the natives. Almagro asked if he might take back to Panama a few of their golden ornaments.

"Why do you wish to do that?" enquired Pizarro.

Almagro held up a heavy bracelet of gold.

"This will save me so much talking," he answered.

"It will only be necessary to dangle a few like this before the eyes of the people and they will fall over each other in their eagerness to volunteer."

Pizarro smiled grimly, and Almagro's wish was granted.

The pilot, Ruiz, sailed on along the coast till he

reached a point half a degree south of the Equator. To him belongs the distinction of being the first European to cross the line on the western side of America. His journey southwards was not without interest. One day, as he was looking towards the shore, he was surprised to see a strange vessel, propelled by sails, moving northwards as though to meet him. He could not believe it was manned by Europeans. "Yet surely," he thought, "no natives possess a vessel of that size. And if they do, how comes it that they understand navigation by sails?"

Slowly the distance lessened between his own ship and the mysterious craft, and presently the latter drew alongside. Then Ruiz saw, much to his astonishment, that it was manned by Indians. He invited some of them on board, and the eyes of the Spaniards were filled with longing as they perceived the golden ornaments worn by their dusky visitors. Ruiz learned, by the aid of an interpreter, that they had come from Tumbez, a town some distance to the south. Their garments were of a fine texture, and had been woven, as the Spaniards discovered later, from the wool of those curious animals of the Peruvian plateau, the llama and the alpaca. It was evident that these Indians were more civilized than any they had come into contact with as yet.

Ruiz did not return for several weeks. During his absence Pizarro was finding out by experience something of the possibilities and drawbacks of the country around the San Juan. Exploration was most difficult. Dense forests, swamps swarming with alligators, precipitous

mountains, and wooded ravines all combined to make the work of the explorer both arduous and dangerous. The Indians, too, were hostile. Fourteen of Pizarro's men were one day exploring a river in a canoe. At a sharp bend in the stream their boat ran aground, and before she could be pushed off again they were surrounded and captured by a horde of armed natives. What their ultimate fate was we do not know. But when the spot was visited some time later by a search party of Spaniards they found an upturned boat, and the trampled earth and the beaten-down grass around gave evidence of the struggle that had taken place.

Notwithstanding the hardships of the journey the natural beauty and strangeness of the new land must have delighted even these hardened adventurers. Giant flowers of magnificent form and hue grew in profusion. Parrots of gorgeous plumage flew from tree to tree. Rainbow-tinted humming birds flashed hither and thither, and troops of monkeys chattered and grimaced their surprise at the intrusion of these strange travelers. But it was an anxious time for Pizarro. Added to the other dangers of the forest was that of hunger; and not a day too soon did Ruiz return, cheering them all by his account of what he had seen. A few days later Almagro arrived with provisions and reinforcements. The recruits numbered about eighty. Most of them were adventurers but lately come from Spain, and although they had not been quite so eager to join the expedition as Almagro had anticipated, yet his task of enrolling volunteers had not proved nearly so difficult as on former occasions. Hunger and the privations of

the past weeks were quickly forgotten by Pizarro's men in their anxiety to push on to the south.

Soon after his departure from the San Juan, Pizarro was compelled by storms and contrary winds to seek the shelter of an island lying a few miles off the coast, the Isla del Gallo. Here he stayed for a fortnight. Then he sailed on southward again, and as he proceeded he saw with gladness that the character of the coast was improving. The shore was no longer fringed with dreary mangrove swamps. Forests of mahogany and of ebony were passed, while here and there plantations of yellow maize, of potatoes, and of cacao bore witness to a higher state of civilization reached by the inhabitants. But in spite of these signs of improvement in the country and in the people Pizarro was much disturbed over one thing, and this was the behaviour of the Indians towards him whenever he chanced to land. His followers were brave men, he knew, but what could they do against such numbers as often thronged around them with menacing gestures?

At one place of call he and a handful of Spaniards were only saved by an accident which befell one of his cavaliers. It happened in this way. The cavalier, who was mounted, thinking that it would serve a useful purpose if he attracted the attention of the Indians, decided to give them an exhibition of horsemanship. He galloped and wheeled his steed, guiding it by a touch of the hand or knee. Presently he noticed with joy that the manœuvre was succeeding, for the natives were staring at him with open eyes of wonder. But just at that moment something occurred which the rider had

not expected. His horse shied, swerved suddenly, and the next moment the rider was thrown from his saddle on to the soft sand. Now the Indians had never before seen a horse. They looked upon the Spaniard and his charger as being one animal. And no sooner did they see this wonderful creature divide into two parts than they were spellbound, powerless from fright and amazement! Before they had recovered from the shock the Spaniards had time to regain their vessel in safety.

These continual attacks from the Indians persuaded Pizarro of the folly of going farther south without even more recruits. He discussed the question long and carefully with Ruiz and Almagro, and at last they arranged that he should stay on the Isla del Gallo, where he would be safe from Indians, while Almagro should return once again to Panama for recruits.

When the governor at Panama heard Almagro's report of what had happened, he was so angry that he immediately sent a vessel to bring Pizarro back. The Spanish commander's position was thus a critical one, and had he acted with less firmness than he did, the story of Spain's conquests in South America might have been very different from what it is. His followers were on the verge of mutiny. They chafed under what they considered to be Pizarro's cruelty in forcing them to stay upon the inhospitable island; and when they espied the sails of the ship sent by the governor they were filled with the one idea of getting aboard and of bidding "goodbye" to del Gallo for ever. Pizarro, who knew that nothing would induce him to return to Panama, saw that he must act promptly or all would be lost.



Seizing his sword, he drew a line on the sand from east to west. Then he bade the men take their choice. Pointing to the north, he cried: "There lies Panama, and safety, and ease, and—poverty. And there," and he swung round to the south—"there lies Peru. That journey means hardships, hunger, and toil. But it also means riches and fame! Choose, each of you!" So saying, he crossed over the line. The brave pilot, Ruiz, was the first to follow, and after him eleven others took their stand to the south.

The rest returned to Panama, leaving twelve fearless Spaniards alone on the island, for Ruiz also went back, though not as a deserter. He returned in order that he might help Almagro in the delicate task of regaining the sympathies of the governor.

The governor's representative on the ship, angry at the obstinacy of Pizarro, had refused to leave behind any provisions, so that once again Pizarro was threatened with starvation. There was no food whatever to be found upon the island, and Pizarro and his companions decided to leave Gallo immediately. To accomplish this purpose a raft must be built. They therefore set to work, and, after severe labour, succeeded in making one sufficiently strong and seaworthy to carry them to Gorgona, an island lying a few miles to the north. On Gorgona they found game in the shape of birds and of an animal something like the English rabbit. All fears of death by starvation were dispelled. The sport of killing these creatures, too, did much to make less intolerable the long period of waiting for Almagro's return. Days lengthened to weeks, and weeks to months, until

even Pizarro began to wonder if help was ever coming to them. Day after day they climbed to the highest point of the island and scanned eagerly the stretch of waters to the north for the white flash of a sail, and day after day they went back disappointed. Each man, as he looked into the despairing faces of his companions, asked himself one question, a question he dared not ask aloud: "Is this to be the end?"

Events seemed to conspire to make their lot wretched. The weather was bad, and torrents of rain fell for days together. But when their despair was deepest, help was near at hand. One day, seven months after they had first set foot on Gorgona, one of their number, who had climbed up to the lookout station, came rushing back, waving his arms and shouting. His friends caught the welcome words: "A sail! A sail!" The long-expected vessel had at last come back. Almagro's story was soon told. He and Ruiz had got with difficulty permission to return, and had brought with them only a few recruits. But, reinforced or not, their arrival filled Pizarro and his fellow prisoners with joy. It meant for them liberation from Gorgona.

With the loss of as little time as possible Pizarro set out again southwards. He sailed past the Isla del Gallo, which he had such good cause to remember, and was soon off Cape Passado, the farthest point reached by Ruiz. Here and there along the coast he dropped anchor, but he made no inland excursions. His force was far too small to risk another assault from the natives; and, besides, his one desire now was to bring his ship safely to the shores of Peru. Away to the east the mighty

Andes could be seen, and glimpses were caught of the glistening, snow-capped summit of the giant Chimborazo. In spite of storms which drove him westward out of his course, he made good progress; and twenty days after leaving Gorgona he rounded St. Elena Point, to find himself in the sheltered waters of the Gulf of Guayaquil.

There were with him on board some of the natives of Tumbez, taken by Ruiz from the Indian craft, and it was to their home that Pizarro sailed. Tumbez was a town of imposing size lying on the southern sweep of the gulf, and off a small island facing this Indian port Pizarro anchored. The natives who swarmed round the Spanish ship in their frail craft were curious but friendly. On learning that their visitors were in need of provisions they hastened to supply them; and bananas, maize, pine-apples, coconuts, fish, and game were pressed upon the Spaniards.

This friendliness shown by the natives relieved Pizarro of a great anxiety. He invited some of their chiefs on board. They came, and their pleasure and astonishment knew no bounds as they gazed upon the wonderful things shown them by their Western hosts. Visits were paid by Spanish cavaliers to the mainland, and the amazement of the Indians was increased when they saw a musket for the first time. They marvelled at its "big voice", and asked that it might "speak again". A cock, taken on shore by one of the Spaniards, probably caused even more excitement than the musket. The Peruvians quite thought that their visitors understood the crow of the bird, for they crowded round the Indian inter-

preter and begged him to tell them what the cock was saying!

The Spaniards' stay at Tumbez was interesting and enjoyable. Nothing occurred to arouse suspicion in the breasts of the natives. Their visitors, not being strong enough to strike, showed only the better side of their natures. The sword of the conqueror remained in its sheath. Yet, fifty years from this time, the town of Tumbez, teeming with Indian life and activity, was a place of ruin and desolation. It had been despoiled by the reckless hands of Spaniards.

As Pizarro sailed to the south from Tumbez, signs of a higher civilization were everywhere manifest. He was now getting abreast of the true home of the Peruvians, that wonderful people whose achievements in architecture, in irrigation, and in government gave the Spaniards so much ground for astonishment a year or two later. As Pizarro continued his voyage along the coast he saw evidences of Peruvian enterprise in the well-planned towns and the cultivated plots. But within the country itself he found more to marvel at, for there he was surprised to see good roads, massive buildings, and a wonderful system of canals and aqueducts.

Wherever he called, the natives were friendly, supplying him freely with fruit, vegetables, and fish. He rounded Cape Blanco, passed by the site of the now important town of Truxillo, and finally reached a point in the latitude of 9° south. Here Pizarro felt that he had gone far enough. He had seen with his own eyes the country of which he had so often dreamed, and he was not disappointed. There were abundant signs of

the presence of precious metals, ready for the first conqueror. It would be a glorious addition to Spanish territory in America; but with his small company, Pizarro knew that he must leave it alone for the present.

After an absence of nearly two years he returned to Panama. A few months later he was on his way back to Spain to lay before the king an account of all that he had seen. He was the discoverer of Peru; his ambition was to be its conqueror.

Cartier's Voyages to the St. Lawrence

One of the most remarkable features of Canada is its great natural highway, the St. Lawrence. The river has been a most important factor in the development of the country. A voyage westward on its broad bosom will bring us to that system of immense lakes of which Lake Superior is the largest, and to the world-famed Niagara Falls. If this mighty river could speak, what strange and stirring stories it could tell of the various types of men who have sailed upon its waters! First came the Indian in feathered headdress, driving forward his frail, dancing canoe with lusty strokes of flashing paddle. Then, close in his wake, appeared the explorer with his bigger and heavier vessel driven by sails, proceeding slowly and cautiously, knowing not what new danger might lie before him. Next came men with kind but serious faces, and dressed in humble garb, priests journeying inland, at risk of life and limb, to teach the ignorant natives. Then followed boatloads of hardy settlers, with their wives and children, the faces of all

lit up with hope and expectation; for were they not going to begin life afresh, to set up new homes in this smiling Land of Promise? Later we see a fleet of grim warships heaving on the tide. Presently from their midst creeps out a line of small boats, each filled with soldiers. They float silently up the river, and are lost to sight. We wait and wonder. Soon from those noble heights across the stream we hear the boom of cannon and the ring of musketry. A fierce fight is in progress. The brave young English commander, James Wolfe, and the gallant Frenchman, Montcalm, are engaged in a struggle to the death. When the clouds of war have cleared, the sun shines brilliantly again upon the river. And now in quick succession pass ships of all kinds, each with its human freight of immigrants. The St. Lawrence pours eastward to the sea. But westward there flows this other tide, a tide of men of all nations, going to till the fertile soil, clear the forests, build cities, and link up east with west by iron roads.

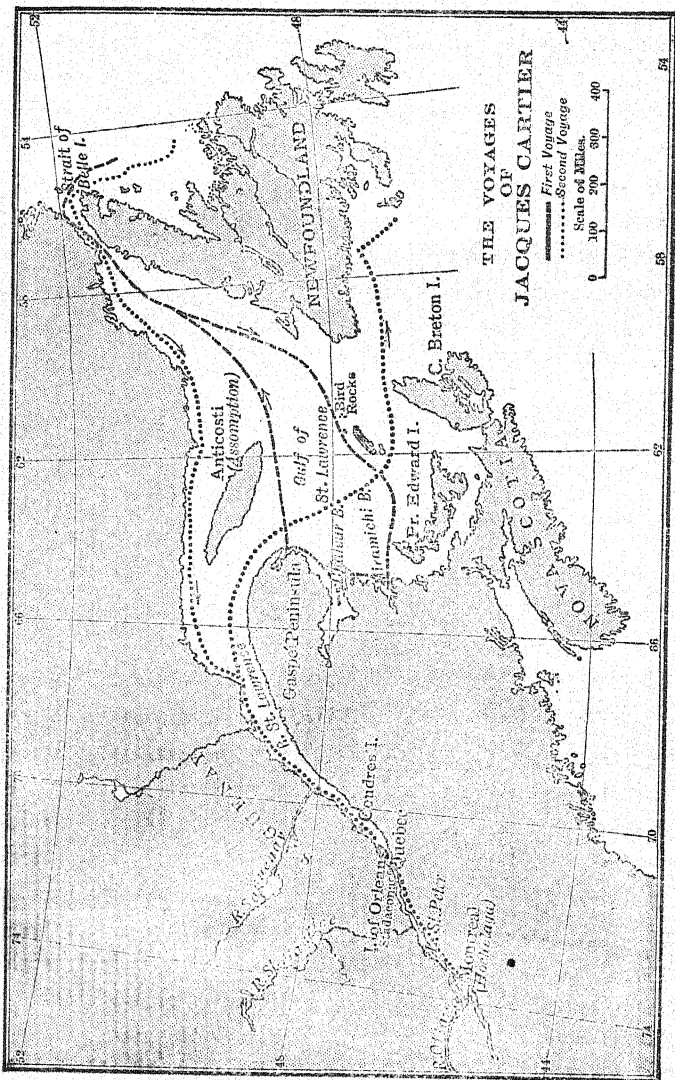
The earliest settlers to make their homes along the shores of the St. Lawrence were Frenchmen. And at the present day fully a million and a half of people occupying this part of Canada still speak the tongue and profess the religion of their forefathers. It was the adventurous natures of some simple sailors from the Breton and Biscayan coasts that led to the discovery of the St. Lawrence. These hardy seamen* already knew of the inexhaustible fisheries of that part of the Atlantic Ocean near Newfoundland, and it was while engaged in fishing in these waters that the discovery was made.

But it is to Jacques Cartier, a native of St. Malo, in

Brittany, that the honour belongs of having been the first to sail for any distance up this mighty river. He had been commissioned by Francis I to find a short passage to Cathay. There the French king was desirous of founding a new empire, hoping thereby to rival his enemy, the King of Spain, who had gained such riches from the discoveries of his sailors in America.

Between the years 1534 and 1542 Cartier made three voyages to Canada, and there are some grounds for thinking that he made a fourth one later than 1542. His first voyage lasted only six months, and was spent in the exploration of the Gulf of St. Lawrence. He probably touched first at different points on the north-eastern shores of Newfoundland. Then he crossed the Strait of Belle Isle, to the inhospitable coast of Labrador. The country here he described as being "very like the land given by God to Cain"—a striking phrase for summing up the dreariness of these ice-bound shores. Leaving Labrador he passed southward through the Belle Isle Strait, and while in the northern part of the gulf saw an island lying some fourteen leagues from the shore. Cartier, in his journal, recounts the surprising fact that bears swam from the mainland to the island in order to catch the birds which flocked there. But naturalists to-day will not readily accept this statement. They feel convinced that either Cartier was deceived as to the distance, or that he was guilty of exaggeration. Forty-two miles to secure an appetizing lunch is something hard to believe—even of a polar bear.

Skirting the western shores of Newfoundland, Cartier



saw, one day, a few miles to the south, a cluster of rocky islets. He was very much struck by their appearance, for at that distance they seemed to be covered with snow. Yet he wondered how that could be, considering the latitude and the time of year. Approaching them, however, the mystery was explained. Their whiteness was due, not to snow, but to the presence upon them of countless seabirds. Sailors, armed with sticks, rowed ashore, and in a very few minutes had killed several hundreds, which proved a very welcome change of diet to Cartier and his men.

Leaving the Bird Rocks, for so he called this group of islets, Cartier sailed in a westerly direction towards the shores of what is now New Brunswick. He sailed into the Bay of Miramichi, and, following the coastline to the north, entered a larger arm of the gulf, to which he gave the name of the Bay of Chaleur (*Heat*); for when he landed the weather was, in Cartier's own phrase, "like a Spanish summer".

At Chaleur Bay he had his first intercourse with the natives. They were hospitable and inoffensive. Some of them came in their boats to the little cove where Cartier had anchored. At first they seemed half-afraid of the French sailors; but, gradually growing bolder, they made signs that they wanted to barter, and held up skins similar to those they were wearing. Cartier, with some of his sailors, went ashore. They took with them knives, axes, beads, and brightly coloured blankets for barter, and a gorgeous red hat for the native chief. The Indians, reassured by the Frenchmen's signs of friendliness, soon gathered round, and exchanges took

place. So anxious were these children of the forest to possess what were to them such wonders, that Cartier began to feel sorry he had not come provided with a larger stock of goods. During a lull in the proceedings one of the French sailors chanced to look round, and he saw, scurrying away from the crowd towards the forest, a stark-naked Indian, carrying two axes in his left hand, and under his right arm a red-and-white blanket. To get them the poor fellow had actually disposed of the very skins he had been wearing!

The women at first were very shy; but when they saw the tempting articles brought by Cartier their timidity vanished. Their delight was unbounded when he presented each with a tortoiseshell comb, a tiny bell, or a string of glass beads. Their faces broadened into smiles, and their tongues clattered noisily, as they vied with each other in displaying these trinkets to the best advantage.

Cartier was enchanted by the beauty of the country north of the Bay of Chaleur. Corn grew in abundance, while huge vines, beautiful flowers, and luscious fruits of all kinds made some of his company long to end their days in this delightful spot. He followed the coast to the north till he reached Gaspé Bay. Hereabouts the country was less fertile. On a promontory at the northern entrance of the bay Cartier planted a cross, some 30 feet high. The inscription on it proclaimed that a loyal subject of the French king had penetrated thus far into the unknown regions of North America. Before he departed for France, Cartier took on board two sons of an Indian chief. To persuade

them to accompany him was no easy matter; but the offer of several gaudy coats and shirts, of copper chains and of knives, at last overcame their reluctance. The two natives returned with him to France, and, as will be seen, their presence with Cartier on his second voyage helped considerably in gaining the goodwill of other Indians towards the members of the expedition.

So glowing was Cartier's account of the country he had discovered that he secured the support of several wealthy patrons for his next voyage. Three vessels were fitted out. They were small, certainly, compared with even a coasting steamer of to-day, yet the largest was twice as big as the little ship in which he had made his previous attempt.

The voyage began badly. Tempestuous weather was experienced in the Atlantic, and the three vessels lost sight of one another. The possibility of this, however, had been foreseen by Cartier, who before starting had fixed upon a place of meeting on the eastern shores of Newfoundland. And at this rendezvous the three ships met after a lengthy voyage of six weeks. From here Cartier sailed to the north, passed through the Strait of Belle Isle, and came to anchor on the southern shore of Labrador in a small bay to which he gave the name of St. Laurent. This name was afterwards given to the river whose estuary Cartier was now entering. Continuing his course westward, north of the island of Assumption (Anticosti), he was told by the two Indians on board that he was sailing along the shores of the kingdom of Saguenay.

Day after day this daring explorer from distant Brit-

tany held steadily on his course. The shores on his right hand were for the greater part mountainous, and clothed with forests to the water's edge. Here and there were breaks in the wooded slopes where smaller streams from the great unknown interior of the north-west poured their waters into the St. Lawrence. This part of the journey was not without thrill and interest. Frail birch-bark canoes, manned by natives, often shot out from secluded creeks into mid-stream, so that their tawny-skinned occupants might view more closely these pale-faced strangers. But no hostilities were attempted. The natives were probably awed by the size of their visitors' ships, and regarded the Frenchmen as beings against whom arrows and tomahawks would be useless.

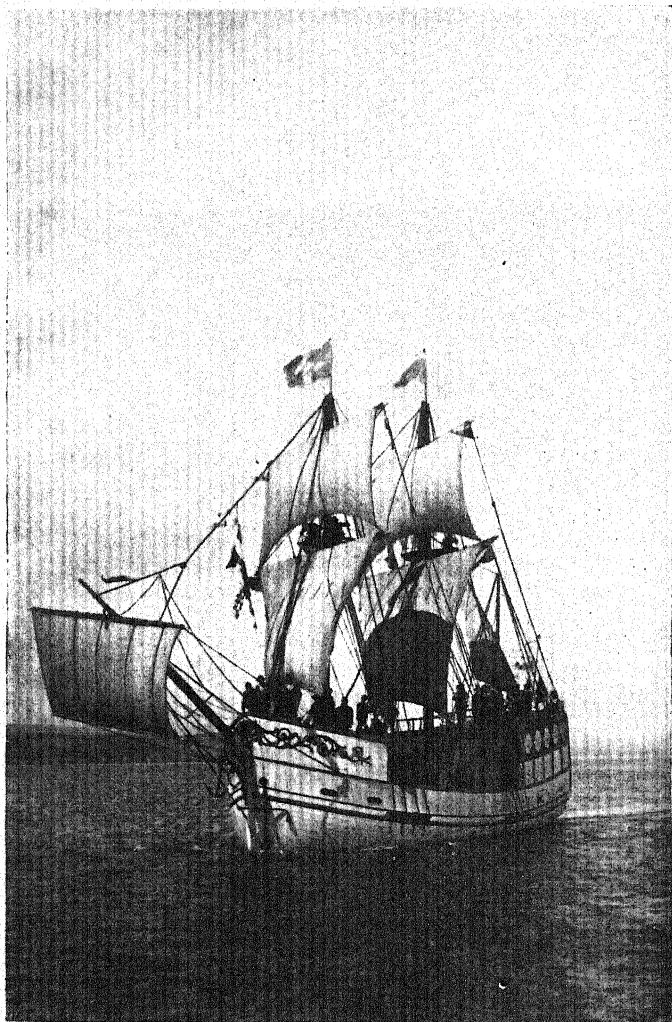
Cartier mentions that at the mouth of one river he saw a very strange kind of fish, which the Indians told him were found only at that point. These fish were as big as porpoises, their bodies quite white, and, most curious of all, their heads were similar in appearance to that of a greyhound. What they could have been still remains a mystery.

About 80 miles beyond the entrance to the Saguenay River, Cartier came to an island which he called Coudres Island, because of the large number of hazel nuts growing there (Fr. *coudre*, hazel nut). He tells us that they were as large as any found in France, and sweeter than those of his own country. A few days were spent here, and then, still keeping to the left bank of the river, he came to the Isle of Orleans.

Opposite the Isle of Orleans was the Indian village of Stadacona. A friendly reception was given by the

natives of this stronghold to the explorers, largely owing to their being accompanied by Indians from Gaspé, who belonged to the same tribe. Chiefs from the mainland came on board, making signs of joy and of welcome. Some of their actions must have appeared singular, if not alarming, to the Frenchmen. Weird dances, blood-curdling shouts, wild gesticulations, awful contortions of the body—such were a few of the outward manifestations of welcome. It is no reflection on the courage of some of Cartier's men to say that they felt easier in mind when they had pitched their camp safely at the mouth of the St. Charles River. There, within their own defences, they felt secure; and if the necessity arose they could give blow for blow with more freedom than on the cramped deck of a sailing ship. Actually, however, there was not the slightest cause for suspicion. The natives, as yet, were quite sincere in their friendship.

Cartier explored the neighbouring country and island, and was delighted with everything he saw. To him it seemed a veritable Paradise. Everywhere the soil was abundantly fertile. Tempting fruits, beautiful flowers, huge vines, and magnificent forest trees of all descriptions were in abundance. Game was plentiful, and parties of French sailors frequently set out on hunting expeditions accompanied by friendly natives as guides. The days flew by only too quickly. Many of Cartier's men, indeed, would fain have stayed in this idyllic spot for the rest of their lives. But their leader was anxious to penetrate farther still into the interior of the country. Wonderful accounts of an Indian village many miles up the river had been brought to him by the natives, and



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Photo, Underwood

**CARTIER'S SHIP (AS RECONSTRUCTED) SAILING UP
THE ST. LAWRENCE**

The ship formed part of the historical pageant given during the visit of
the Prince of Wales to Canada in 1908

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he was determined to see the place for himself. It was called Hochelaga, a name which even the boldest of the Indians at Stadacona mentioned with veneration and awe. It was now September, and Cartier knew that the terrible Canadian winter would soon be upon them. A start must be made at once.

The natives of Stadacona, evidently with the best intention, tried to induce Cartier to abandon the idea of proceeding farther. They spoke of dangerous stretches of rapids, of rock-studded channels, of shallows in which he was sure to ground, and of the ice and snow and bitter cold he would experience ere Hochelaga could be reached. But Cartier could not be dissuaded from his purpose. Then three Indians with blackened faces, with long horns sticking out from their foreheads, and dressed in the skins of black and white dogs, appeared before him. They were represented as being devils, messengers from the terrible god at Hochelaga, sent to warn the Frenchmen of the folly of their intended journey. But this mummary had no effect upon Cartier, who merely laughed at it.

So about the middle of September, with one of his vessels and a couple of large native boats, Cartier started from Stadacona for Hochelaga. He had left about half his company behind at the mouth of the St. Charles, together with the two Indians, who were so superstitious that they could not be persuaded to accompany him.

But the warnings from the Indians at Stadacona had not been without effect upon some of the sailors whom Cartier selected to go with him to Hochelaga. These

set out from Stadacona with many misgivings, half-fearing they would never return. Nor must we think them cowards for feeling as they did. They were in an entirely new country, amongst a strange race of people, journeying they knew not whither, and uncertain whether the navigation of the river above Stadacona was not as dangerous as it had been represented. Perhaps winter did come suddenly in this country, bringing with icy breath the sleep that knows no waking. And what of the dreaded Indian god of Hochelaga? What rites might not be celebrated at the altars built to his glory? Such were the questions troubling a few of Cartier's followers, good Catholics though they were, as the boats made their way slowly up the St. Lawrence. The wooded banks were carefully watched, and a cautious lookout was kept for rapids, rocks, or shoals.

Few mishaps, however, befell them. At one place they encountered rapids, but of these they were warned in time by some friendly Indians from the shore. These natives came on board Cartier's boat, and embarrassed him by offering as a present—two little Indian children! Cartier for the moment did not know what to do. He was conscious of the responsibility that would devolve upon him if he accepted them. On the other hand, to refuse them would sorely offend the Indians, and to offend them might mean trouble. So he made a compromise. With many smiles, and with the most elaborate gestures of thanks, he accepted *one* of the children, a little girl seven years old. And there is every reason to believe that she gained much by passing from the care of her savage parents to that of the kind-hearted

Frenchman. The gratified Indians smiled broadly in return, and soon afterwards returned to their canoes.

Cartier sailed on, past the site of the town of Three Rivers, into the wider waters of Lake St. Peter. Here he discovered shallows, and the large vessel had to be left behind. The scenery on either hand since he had left Stadacona had been delightful. Wherever he landed he found bubbling springs of clear water, climbing vines, and magnificent fruits and flowers. The trees, clothed in their autumn-tinted foliage, made the aspect of the shores one of entrancing beauty, and birds quite new to them gave life and animation to the scene.

At length, on 2nd October, Hochelaga was reached. And if, in spite of the grave warnings of those at Stadacona, the journey to it could be so pleasant, then surely nothing need be feared at the town itself. So thought those who had dreaded the visit to this Indian capital.

Hochelaga stood where now stands the city of Montreal, on the island of that name. A thousand Indians—men, women, and children—met the Frenchmen when they landed from their boats, giving signs, by every means in their power, of welcome and of joy. Chiefs came forward and exchanged presents with the leaders of the expedition. As evening drew on the French returned to their boats. That first night was never forgotten by Cartier and his followers. Sleep was out of the question, for the Indian festivities were in full progress. In the light of huge bonfires they saw men, women, and children dancing in the wildest abandon, while shrieks of savage delight rang out as they leaped round the darting flames, and beyond the whirling, jost-

ling mob of Indians the blackness of the forest—a weird, moving spectacle to the sailors from far-off Brittany!

And why this tremendous outburst of joy? The reason was that these Indians regarded the Frenchmen as supernatural beings, as gods who had been sent to cure them of their ills. Cartier became aware of this belief the next day, when a dismal procession of natives—wounded, lame, blind, and diseased—came to be cured by a touch from his hand. It was fortunate, perhaps, for the Frenchmen that they departed from Hochelaga before the Indians discovered that their visitors, though different in speech and colour, were only ordinary mortals. Had they been compelled to stay longer they might have learned how terribly cruel these same Indians could be. The treatment received at their hands by the French Jesuit missionaries who visited them some years later was brutal and inhuman. Those brave men, in their heroic efforts to bring light to the benighted savage, risked death and tortures worse than death.

Hochelaga was built within an enclosure consisting of three rows of stout palisades 20 feet in height. This ring of fences served as a protection against attacks from hostile tribes. Near the fences, on the inside, were raised platforms from which the defenders poured arrows, stones, and other missiles upon their assailants. Entrance to the town was made through one gateway, which was always carefully guarded. The town consisted of about fifty long houses, built of wood and bark, each house being divided into several compartments, one for every family. Large supplies of wheat, of coarse flour made by pounding the grain between flat stones,

of smoked fish, and of game were kept within the enclosure.

This description of Hochelaga is interesting, for from it we can learn much as to the lives of these Indians. They lived by tilling the soil, by fishing, and to a smaller extent by hunting. But the tall and strong palisades, the raised platforms, and the heavily barred gateway tell us something of another side of their lives. They had always to be prepared for attack. The surrounding forests might at any moment echo with the fierce war-shouts of bitter foes. Then came fights to the death, in which the worst features of savage warfare were displayed. Sometimes, of course, they were the aggressors; hence the rude but effective fences, necessary for the protection of each community.

Cartier visited the mountain near, named by him Montreal (*Royal Mountain*), from the summit of which he could see the St. Lawrence flowing on its journey to the distant Atlantic. All around was seemingly a limitless stretch of forest, except where, here and there, small clearings had been made for Indian encampments.

What a difference the intervening years have made! The mighty river still flows on. The noble mountain still stands; but at its foot there now lies a huge city, a teeming centre of industry, of commerce, and of learning. Native encampments have given place to thriving towns, and the forest is steadily falling before the axe of the lumberman, the herald of the encroaching settler.

Cartier returned to Stadacona before winter set in. Here he found that those left behind had built a fort at the junction of two small streams; and, on going into

the reasons for this, he learned that the behaviour of the neighbouring Indians during his absence had been at times so suspicious, that he considered his men quite justified in erecting the fort. Their position would, at any rate, have been a little less hopeless in case they had been attacked.

At this fort the French spent the weary months of the long Canadian winter. It was a most unhappy time for all of them. Close confinement and want of variety in food led to an outbreak of scurvy. Every day fresh victims were laid low by the disease, and several died. The outlook was beginning to appear desperate, when one day they chanced to learn of a cure for scurvy from a friendly Indian. This was a drink in which the leaves of the spruce tree had been steeped. The remedy proved most effective, and the ravages of the disease were checked.

As soon as spring came preparations were made for the return. Two or three Indian chiefs were taken back to France. One of these told wonderful stories of gold and precious stones to be found in the Saguenay kingdom. Cartier had his doubts as to the truth of these stories; but he thought that by taking the natives back to France a greater impression could be made upon those at home of the wealth of this new country of the West.

On 16th July, 1536, Cartier sailed into the harbour of St. Malo. He had stirring news for his countrymen. Across the Atlantic Ocean lay a country of vast extent, its soil abundantly fertile, yielding fruits and crops, with wide stretches of forests; a country watered by noble

streams, and of great prospective mineral wealth hidden in the mountains where these rivers had their sources.

Drake's Voyage Round the World

Of all that brilliant company of sailors, soldiers, courtiers, and statesmen of the days of Elizabeth there is none, perhaps, whose life is more fascinating and thrilling than that of Sir Francis Drake. He it was who sacked the wealthy cities of the Spaniards in America, who captured so many of their heavily laden treasure ships, and who delayed the coming of the Armada by "singeing the beard" of the King of Spain. Against the Spaniards he was ever ready to strike a blow; for, among other reasons, he could not forgive them for their acts of fiendish cruelty towards the natives of America. They, in their turn, hated Drake, and feared him. To them he was *El Draque* or "The Dragon".

It was in the early part of the year 1573 that Drake resolved upon his great enterprise. He was in Central America at the time, and was being guided across the Isthmus of Panama by some friendly natives. They led him to a tall tree, and from this point of vantage Drake saw before him the limitless expanse of the Pacific Ocean. Then and there he implored the Divine assistance that he might, at some time or other, sail thither and make a perfect exploration of the same. For many months afterwards his brain was busy thinking how his ambition might be realized. He would cross the Atlantic, sail up the western coast of America, and surprise by an unexpected visit some of those lordly Spaniards who

appeared to look upon that part of the world as their own private preserve.

Drake had influential friends at Court, and in the year 1577 he succeeded in gaining Elizabeth's sanction to his project. He said little to her of his intended attacks upon Spanish ships and Spanish towns, although, no doubt, from what she knew of him, she fully understood what would be the nature of the expedition. Before he withdrew from her presence she gave him a sword, saying as she did so: "He which striketh at thee, Drake, striketh at us."

The fleet consisted of five vessels, their names being the *Pelican*, *Elizabeth*, *Marigold*, *Swan*, and *Christopher*. These ships were no larger than a fair-sized coaling barge of to-day, yet in them Drake, with his officers and men, set out hopefully for a voyage of many thousand miles. Preparations aboard for the expedition were made on a lavish scale. Drake's cabin in the *Pelican* was luxuriously furnished. His table was laden with the finest vessels of silver and glass, while skilled players were enrolled whose duty it would be to cheer the voyagers with music. Such was the effect of Drake's name, that there was no scarcity of volunteers. Many young men of good families, burning with the desire for adventure, were only too eager to join the expedition.

About 160 men were finally selected, and on 15th November, at five o'clock in the afternoon, the little fleet sailed slowly out of Plymouth Harbour. Drake, wishing to keep his real design a secret, had given out that he was going on a trading voyage to the East. But many of those with him, and many of those standing on the

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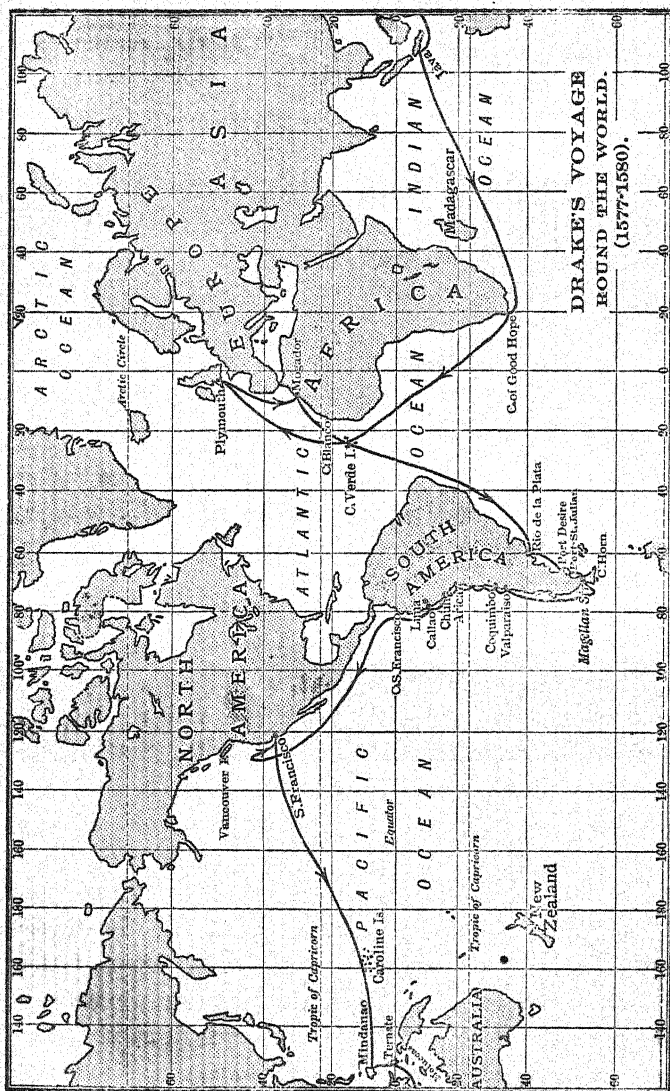
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Photo. Frith

STATUE OF SIR FRANCIS DRAKE

On the Esplanade, Plymouth

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quay watching his departure, knew enough of the fearless leader to reject his explanation. They were convinced that the aim of this voyage was hardly one of mere trade.

The start was unfortunate. The second day out from Plymouth a fierce gale was encountered, and the ships were so badly battered by the storm that Drake had to put back into Falmouth for minor repairs. These, and the unfavourable weather, kept him here for nearly a month. On 13th December he set sail from Falmouth, and, aided by fair winds, crossed the Bay of Biscay and directed his course towards the north-western coast of Africa. Mogador, a port of Morocco, was reached on 17th December, and here Drake made known to his crew the real object of the expedition.

On the morning of their second day at Mogador a boat was sent ashore for the purpose of trafficking with the natives, who had seemed very friendly on their first arrival. Before the boat gained the beach one of the sailors, named John Fry, sprang overboard into the shallow water in his eagerness to be the first to land. But he paid dearly for his rashness. No sooner had he set foot on shore than he was surrounded and seized by a company of armed Moors, who lifted him on to the back of a camel and made off inland with all speed. When Drake heard of what had taken place he hurried on shore with a rescue party. The Moors and their prisoner, however, had vanished. Drake went inland for some distance, but, finding no trace of captors or of captive, he returned, and John Fry was given up as lost. It was discovered later that this kidnapping had been

carried out by order of the King of Fez, who was anxious to glean particulars from the English of an intended invasion of his territory by the Portuguese. Learning nothing from Fry, he sent him back to the coast, whence the disappointed sailor was taken to England by a passing vessel.

After leaving one of the most northerly of the Cape Verde Islands, where water and provisions were obtained, a rich Portuguese galleon was captured. Her crew, however, much to their surprise, were set at liberty a few days later on the Island of Brava. But Drake persuaded her pilot to remain with him. He thought the man might be of service to the expedition owing to his experience of navigation in the South Atlantic.

On 2nd February, 1578, Drake left the western coast of Africa and steered in a south-westerly direction for Brazil. For two months the ships were out of sight of land. At times, for days together, they lay becalmed, the heat of a tropical sun beating fiercely down upon the sailors as they hung listlessly over the blistered bulwarks, praying for a breeze. At other times terrific thunderstorms burst upon them, torrents of rain fell, and tempestuous winds imperilled the safety of the small vessels. It was an anxious two months for Drake, especially as signs of discontent were beginning to show themselves amongst his men. But on 5th April his anxiety was relieved by the sight of the Brazilian coast.

A few days later the mouth of the River Plate was reached, and here Drake put in for water and provisions. After a stay of a fortnight in this estuary he sailed

southwards along the coast, wishing to find a suitable harbour where he might safely anchor; for he knew that the southern winter would soon be upon them. He rowed in shore to inspect one bay. When he got back to the beach to return to his ship he found, much to his dismay, that the vessels were hidden from his view by a dense fog. Luckily Captain Thomas of the *Marigold* managed to keep near the shore, and soon hailed Drake and took him on board. The next morning the rest of the fleet, scattered by a storm that arose during the night, were nowhere to be seen. So Drake went ashore again. The natives fled at his approach, but within their huts he saw many things of interest. He came across the bodies of several ostriches, and near by discovered a native decoy by means of which they stalked these birds. The decoy was simply a long pole to which had been fastened the head, neck, and some of the body feathers of an ostrich. The hunter, holding this stick in front of him, and hidden from view by the mass of plumage, was able to creep near enough to one of the birds to kill it.

During this part of the voyage storms were frequent, and Drake found that his progress was seriously hindered by the constant delays owing to one or other of his ships being driven from the rest. He therefore determined to abandon two of them. The *Christopher* was first run ashore and broken up, much of the wood being divided amongst the remaining ships for fuel; and a few days afterwards the *Swan* suffered the same fate. At length, on 20th June, Drake entered the port of St Julian, where he remained for two months.

At this port so many misfortunes befell the expedition that the sailors, on leaving, called it Port *Accursed*. As soon as the ships came to anchor within the harbour Drake went ashore in a boat. He was accompanied by Captain Winter, the master gunner, and about six of his crew. Just after they had landed, two huge natives made their appearance. Apparently they were peaceably disposed, and both of them seemed to be very interested in the prowess of the gunner with his bow. Presently other natives joined them, and before very long the Englishmen were surrounded by a crowd of Patagonians, in the faces of many of whom Drake thought he saw mischief. Winter tried to draw their attention by shooting, but his string broke. At this mishap there was a movement amongst the Indians, and the hands of some of them flew to their bows. Drake gave the order to retire, and the next moment a score of arrows were discharged at the English. Winter was struck, but he did not fall. Meanwhile the gunner aimed his piece at the Indians. His gun, however, missed fire, and before he could put his hand forward to recock the trigger he was killed. Drake seized the weapon, and, holding it within a few yards of the body of the foremost native, fired. The effect of the charge at such close quarters was so horrible that the natives, taking one glance at the mutilated body of their countrymen, fled in terror. Winter was taken back to the *Pelican*,* but, to Drake's intense grief, he died on the following day.

For a long time Drake had been troubled by the behaviour of one of his officers, Captain Doughty. It was discovered that he had appropriated to his own use

a good deal of the booty from the Portuguese galleon; and in addition it was suspected that he had been guilty of stirring up feelings of mutiny in the minds of his men. At Port St. Julian, Drake decided to bring the matter to an issue. Before a court of forty officers, Drake himself being the president, Doughty was tried. The evidence was carefully examined, and a verdict of "guilty" was returned. Drake gave the convicted captain the choice of three punishments: he was to be sent back to England as a prisoner; he was to be put on shore; or he was to be executed. The first meant a lasting disgrace, and the second certain death at the hands of the natives. Doughty chose death by execution, asking as a favour that he might be allowed first to take the communion with his commander, a request that was granted immediately. After the sacred rite had been celebrated Drake dined with him. They drank to one another, talked freely and easily on a variety of topics, but no mention was made by either of the one subject so near to the thoughts of each. This incident does much to incline us to regard Doughty in a more favourable light; but it also reveals to us the kindness and lack of pettiness in his commander, Drake. Doughty was buried in a grave alongside those of the brave Winter and the unfortunate gunner.

Every member of the expedition was glad to get away from Port St. Julian on 17th August. Three days later Drake gained the entrance to the Magellan Straits. Here his ship, the *Pelican*, was rechristened the *Golden Hind*, in honour of his friend, Sir Christopher Hatton, on whose crest was depicted a golden hind. Then,

having prayed for Divine protection and guidance through the tortuous and dangerous passages of these unknown waters, Drake began the voyage through the straits.

It was a memorable part of their journey. The greatest caution had to be exercised to avoid the jagged points of rock just hidden below the seething waters, and soundings had to be taken constantly. On either hand rose beetling cliffs and snow-capped mountains, and here and there throughout the straits giant rocks stood far out into the waters, looming grimly through the misty atmosphere like grey silent sentinels. To one island upon which he landed Drake gave the name of Elizabeth Island; on another a vast number of penguins were seen, the giant birds affording much interest and amusement to the sailors. Hundreds of them were killed and their bodies taken on board for food. The natives, with whom the voyagers sometimes exchanged visits, were mostly friendly. They dwelt in small huts made by stretching skins over a framework of wood, and lived by hunting and fishing. For knives they used sharpened mussel shells, and so clever were they in handling them that they could cut the hardest woods.

By 6th September the Magellan Straits had been safely navigated, and the three ships were riding on the waters of the South Pacific. Here Drake had expected to find the weather much less boisterous than it had been on the Atlantic side; but he was disappointed. No sooner had the vessels emerged from the straits than a terrific storm blew them in a south-easterly direction. The *Marigold* sank with all hands, the *Elizabeth* was lost

sight of, and Drake, in the *Golden Hind*, was driven as far south as Cape Horn. There, on an island near the southernmost land of the great American continent, he stayed for some weeks repairing his damaged vessel.

By the end of October more favourable winds had sprung up, and Drake started northwards, keeping an anxious lookout for signs of the *Elizabeth*. He held steadily on his course for a month, touching here and there along the coast for provisions and water, and on 30th November entered a small bay a few miles north of Valparaiso. An Indian came out to the ship in a canoe, and on learning that the travellers were in need of provisions he returned to the shore. In a little while he came back bringing with him several hens, a number of eggs, and a fat hog! The man was most friendly, but his gifts, though appreciated by Drake, were of little use for feeding sixty men for any length of time. The Indian was taken on board and piloted the English southwards along the coast to Valparaiso. Here Drake found ample provisions; and here, too, his men had their first taste of plunder.

A Spanish ship lying at anchor in the harbour was boarded, and great was the surprise of her crew when they found themselves confronted by a party of determined English sailors. Promptly they were "clapped down below", and the prize was overhauled. On board there were found 1800 jars of wine and 25,000 golden dollars, or pesos. A visit was next paid to the town, from which the inhabitants had fled in alarm. The churches were plundered, and many costly vessels of gold and of silver were taken from them.

From Valparaiso Drake sailed northwards, his men in better spirits than they had been for many weeks. A fortnight later he anchored in a small bay to the south of Coquimbo, and, accompanied by fourteen men, went ashore. The town was in the hands of the Spaniards, and a great surprise was in store for Drake; for immediately on landing the English were attacked by a body of Indians and mounted Spaniards to the number of about 300. Drake, seeing at once the futility of attempting to retaliate with the mere handful of men he had with him, ordered a return to the boat. One English sailor, however, very foolishly took his stand upon a rock and hurled defiance at the Spaniards. He was immediately struck down by Indian arrows. Then the English from their boat witnessed an exhibition of the most savage cruelty. The Spaniards gave the word, and two natives walked over to where the wounded sailor was lying. With their rude swords they hacked off the head of their victim; and then, having severed his right arm below the elbow, they propped up his body as a target for Indian marksmen. Drake ground his teeth with rage at the sight. How dearly he wished that his force had been larger, that he might have wreaked his vengeance on the dastardly Spaniards for such a barbarous act!

At one spot to the north of this town the English put in for water. They found a Spaniard asleep, and by his side were 4000 silver ducats. Without disturbing him the sailors quickly relieved him of his precious charge. Some days later they came across a Spaniard and an Indian driving a team of eight llamas, each animal

carrying a load of 50 pounds of silver. The sailors laughingly told him that they were grieved to see him working so hard. Would he not allow them to drive the team to its destination? This proved to be a place where an English boat was waiting, and the whole of the silver, much to the disgust of the Spaniard, was transferred to the capacious hold of the *Golden Hind*.

At Arica, on 7th February, more Spanish vessels were plundered. Their crews were on shore, and when they returned they saw their ships standing out to sea. The English, after taking whatever valuables they contained, had lashed the helms, and, as there was an offshore wind blowing, had cut their cables and set them drifting seawards. A week later Callao, the port of Lima, was reached. In this harbour there were thirty ships. Drake sailed in fearlessly, trusting that his identity would not be discovered. He boarded some of the vessels, the crews of which were absent in the town, and found much booty. Then he cut the plundered boats adrift and made preparations for a hasty departure before the alarm could be given. There was another reason, however, for his eagerness to get away; for at Callao he heard important news. A Spanish vessel, called by a name which may be translated *Spit-fire*, and loaded with treasure, had passed Callao only a few days before, bound for Panama. If he could but overtake her! At all events he would try.

But at first the pursuers were the pursued. Before Drake lost sight of land he saw two large vessels sail out from Callao. The Spaniards evidently intended to give chase. Every inch of canvas was set, and the little

Golden Hind scurried bravely before the wind. Presently, however, the wind dropped to a calm. Drake looked astern and saw the two Spaniards gaining surely upon him. For some hours the *Golden Hind* lay almost motionless, her sails hanging loose and limp. Then, just as the English were beginning to think that nothing but the unexpected could save them from being taken, the unexpected happened. Around them they saw dark, rippling patches. A breeze! The wind came as quickly as it had subsided, the sails filled, and northward flew the *Golden Hind*, quickly increasing the distance between her and her pursuers. After a few hours the Spanish vessels gave up the chase.

And now the *Golden Hind* was the pursuer. On board excitement grew daily more intense. Drake offered the gold chain he was wearing, as a reward to the man who should first descry the sails of the *Spit-fire*. He felt confident, from the speed he was making, that he must overtake her before she reached Panama. One glorious day, the first of March, the *Spit-fire* was sighted. The *Golden Hind* was off Cape S. Francisco, and every man rushed on deck, his face aglow with excitement, as the cry came from the rigging: "A sail! A sail!" Nothing could be done but wait and watch as they gained slowly on the prize. As soon as she was within range, shots were fired at her rigging, for her hold was too precious to be damaged. A few minutes later a lucky ball brought down her mainmast. Thus handicapped, the *Spit-fire* was powerless to escape, and soon the *Golden Hind* was alongside. Before proceeding to an examination of her treasure Drake took the prize

some distance from the shore, to be out of sight of passing vessels. Jewels, precious stones, silver, and gold were found hidden in her hold, the value of the whole being from £150,000 to £200,000, or equal to about a million pounds at the present time. Nearly a week was spent in transferring the treasure to the *Golden Hind*.

After this splendid capture Drake's one desire was to get home as quickly as possible. The *Golden Hind* was stored with wealth. His ambition had been more than realized; and every day now in the South Atlantic Ocean increased the risk of his being taken by Spaniards and robbed of everything.

Drake thought first of returning to England by way of a north-eastern passage into the Atlantic, so he set sail northwards along the west coast of America. For six weeks the *Golden Hind*, its hold bursting with treasure, maintained a northerly course. As the vessel drew abreast of what is now the Canadian shore the cold became intense. The sailors, ill-provided with warm clothing, begged Drake to give up the idea of finding a passage into the Atlantic. Then a strong, biting wind from the north made further progress in that direction impossible, and Drake was compelled to run for shelter into the harbour of San Francisco. This refuge was gained on 16th April, and here it was found that the vessel was leaking badly. A fort, protected by huge stones and stakes, was built on the shore. Into this stronghold the sailors carried their precious freight, there to be watched and guarded till the *Golden Hind* was again ready for sea. Scores of natives came to watch them at their labours, but no hostilities were attempted.

The work of repairing the *Golden Hind* occupied them until 23rd July; and then, having affixed to a stout post a brass tablet recording his visit, Drake started on his homeward journey across the Pacific. For sixty-eight days no land was sighted. The weather on the whole was favourable, and fair winds carried them slowly but surely towards the islands of the Eastern Archipelago.

The Carolines were the first islands at which they touched. The natives swarmed round the *Golden Hind* in their queer-shaped canoes, and many of them clambered on board, so that the English sailors were able to view more closely these strange children of the Eastern seas. They all wore ear ornaments of great size and weight; their teeth were jet black; and the nails on the fingers of some of them were over an inch in length! But interesting as they were in appearance they were very undesirable visitors. They were born thieves, nor did they restrain their natural tendency. One native, bolder than the rest, went so far as to snatch a dagger with a glittering handle from a sailor's belt. The Englishmen tried to drive them overboard with rope-ends; but the natives thought it a good joke, and danced round the decks grinning like schoolboys. At last Drake adopted another method. He ordered the biggest gun to be fired over their heads. The effect was magical. They leaped overboard in a flash. Nor did the bravest of them dare to show more than his head above the surface till the *Golden Hind* had got some distance from the shore. Drake called this island, very appropriately, the Isle of Thieves.

A westerly course was taken from the Carolines to Mindanao, one of the Philippines, and from this island a short sail brought the *Golden Hind* to Ternate, in the Moluccas. Here a visit was paid them by the king of the island, and Drake, fully alive to the possibility of future trading, received him with every mark of honour. His ship was hung gaily with flags, and when the three stately barges conveying his distinguished visitor were within a few yards of the *Golden Hind* the guns roared out their welcome. The king probably was as much startled as had been the Caroline natives; but by the time he reached the deck he had regained his composure. He was delighted with everything he saw, and went away filled with regard and admiration for the English voyagers who had given him such a royal reception. The next day presents of rice, sugar, coconuts, and sago came from him, together with an invitation for the leaders of the expedition to visit him in his palace. Drake, however, acting on the advice of his officers, did not leave the *Golden Hind*, not feeling too sure that some treachery might not be intended. But on this occasion the suspicion was groundless; for a few of Drake's men who visited the palace were received with every manifestation of respect and friendliness.

The navigation of this island-studded sea was difficult and dangerous, and at one time it seemed as if they were doomed to lose all their treasure, if not their lives. They had passed the Island of Celebes, and were making fair but cautious headway, when suddenly a grating sound was heard. The *Golden Hind* had struck on a pinnacle of coral rock. The pumps were immediately

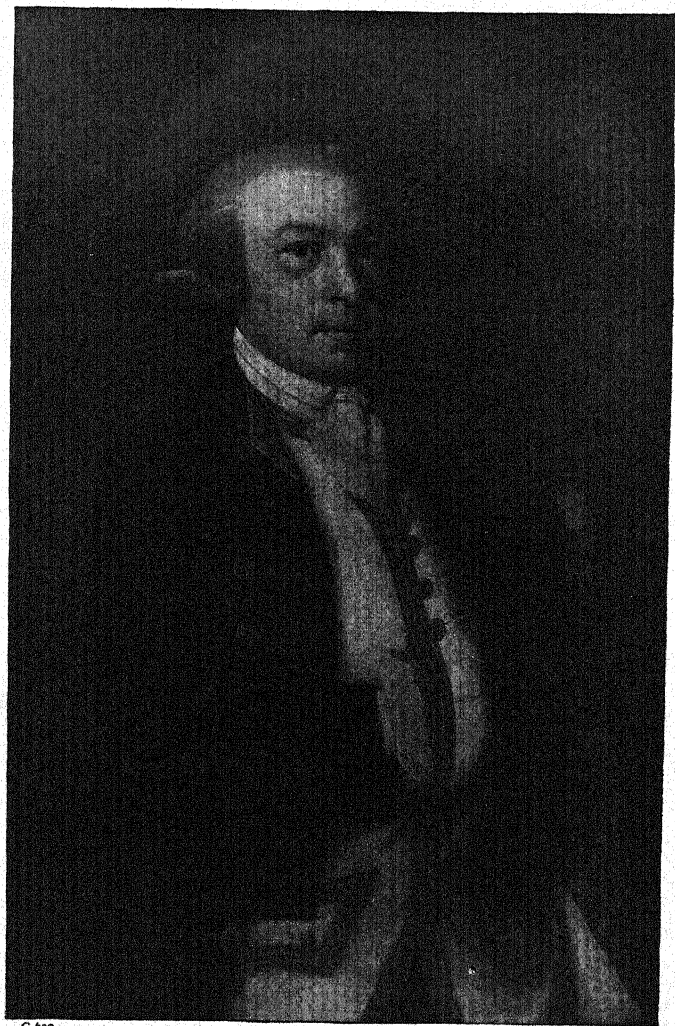
manned, but, to the joy of every soul on board, the ship, as yet, was not leaking. The tide, however, was at its highest, and the fear was that when it fell the *Golden Hind* would heel over. Ammunition, guns, provisions were thrown overboard to lighten her. A strong wind was blowing at the time, with sufficient strength to keep her on an even keel. This wind saved the vessel from destruction; for on the weather side of the rock the water was too shallow to float her, and had she fallen in that direction she must have gone to pieces. The wind gradually increased in force till at last the *Golden Hind*, tearing away the resisting coral, slipped over into the deeper water on the lee side of the rock. They were saved!

Everyone on board was delighted, for it was the narrowest escape from destruction that the *Golden Hind* had experienced. Three months later they were quite clear of the islands and reefs of the East Indies. But during that time the safety of their vessel was often imperilled by furious storms and dangerous coasts, though no serious disaster befell them. The natives with whom they came into contact were hospitable and friendly, and from them the crew of the *Golden Hind* had no difficulty in purchasing such things as sago, figs, pepper, nutmegs, coconuts, and cucumbers. The Island of Java was sighted on 9th March. Drake landed and was well received by the king or rajah. The *Golden Hind* was sadly in need of attention: in many places her timbers had sprung; barnacles covered her sides, and a thorough overhauling was essential. These labours occupied many days, and during that time the friendly relations with

the rajah continued. Visits were freely exchanged, and entertainments given both by natives and by Englishmen.

On 26th March the *Golden Hind* set sail from Java. She had been refitted and cleaned, and in her hold, in addition to treasures, was a good stock of fruit and a number of hens and goats, all purchased from the kindly natives of Java. A pleasant voyage of two months across the Indian Ocean brought them within sight of the southern coast of Africa. The Cape of Good Hope, as it is now called, had received from the early Portuguese navigators an unenviable reputation; indeed it was first called the Cape of Storms. Drake, however, in the *Golden Hind* rounded the Cape with a calm sea and favourable wind. By 15th June she was off Sierra Leone, where water was taken aboard. This was their last place of call. In the middle of September they were beating up Channel, and on 25th September, 1580, anchor was dropped in Plymouth harbour.

When it became known that Drake had circumnavigated the world, had passed through Magellan Straits, had attacked the Spaniards, and, most important of all, had brought home a vast treasure, he was welcomed with the wildest enthusiasm. Yet, like every man who, by his own achievements, makes himself popular and famous, Drake had his enemies. Some found fault with his treatment of Doughty, others tried to belittle the importance of his many discoveries, while some said that by his treatment of the Spaniards he had made them lasting enemies. The Spaniards themselves complained to Elizabeth of Drake's doings, and said he had no right

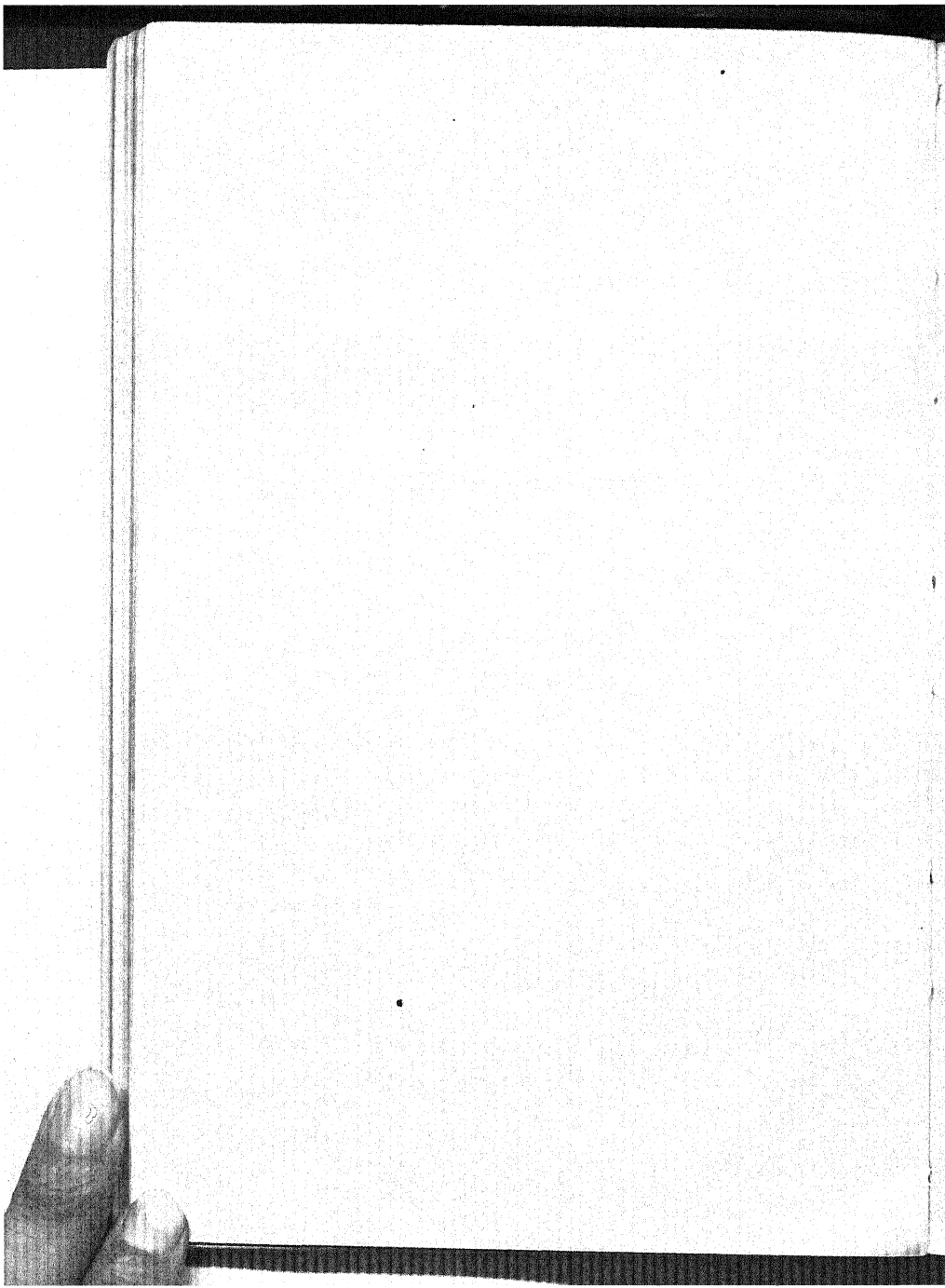


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CAPTAIN COOK

From the painting in the National Portrait Gallery, painted in 1766
for the Governor of Newfoundland

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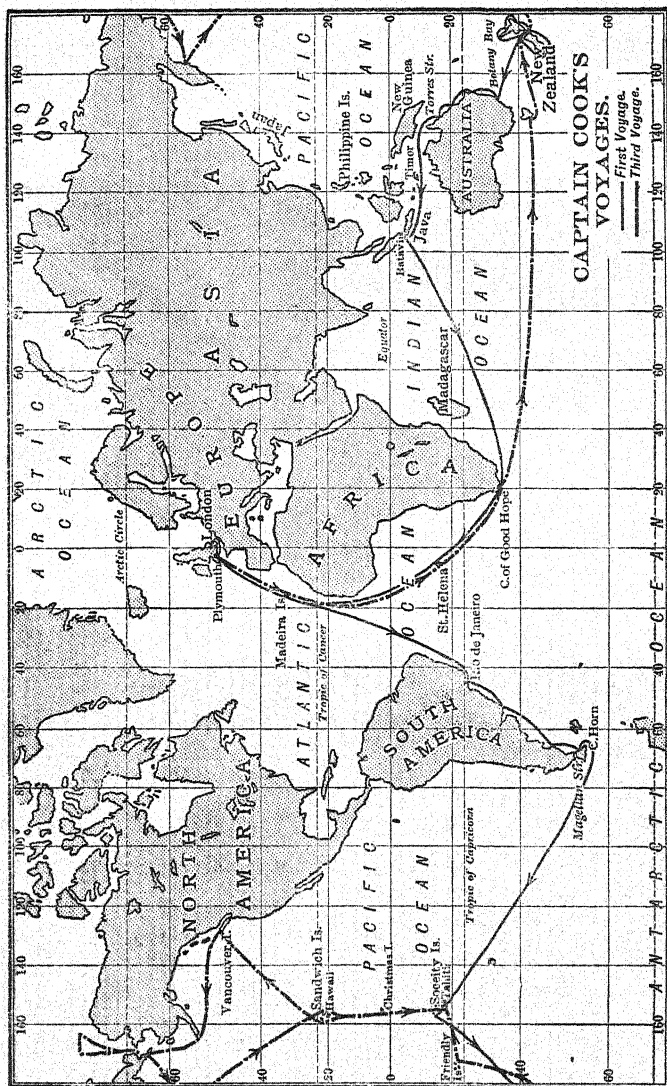
to intrude upon their "preserves" in the South Seas and the Indies. Elizabeth, though ridiculing this charge, was forced for a time to affect a coolness towards Drake she was far from feeling. But in April of the next year, knowing that trouble with Spain could not be far ahead, she cast all scruples aside. She visited Drake on board the *Golden Hind*, lying at Deptford; and after the banquet which he had prepared in honour of her visit, she bestowed upon him the well-merited distinction of knighthood.

Captain Cook

In the year 1768 the Royal Society decided to send out an expedition to the South Pacific. Astronomers knew that on a certain day in the following year the planet Venus, our nearest celestial neighbour, would pass across the sun's disk. This phenomenon is of very rare occurrence, and it was hoped that, by taking careful observations during the "transit", as it is called, valuable additions might be made to scientific knowledge. But who was to be put in command of such an expedition? Two qualifications were necessary. The man chosen needed to be an experienced seaman, but it was also necessary that he should know something of astronomy, and be able to make observations of a scientific nature. James Cook, lieutenant in the royal navy, was such a man. Four years previously he had been given the position of marine surveyor of Newfoundland and Labrador, and he was now selected to be the leader of this expedition.

Captain Cook, to give him the title by which he is

known to the world, was born in Yorkshire in the year 1728. His father was a farm labourer, and very early in life young Cook was sent out into the world to earn his own living. Apprenticed to a small grocer in a Yorkshire village on the seacoast, he disliked the work, and ran away to Whitby to become a sailor. By intelligence and energy he rose to the position of mate. Soon after the outbreak of war with France he enlisted as able-bodied seaman in the royal navy, and from that time his career was one of rapid advancement. By the age of thirty he was master on board the *Mercury* in the squadron under Sir Charles Saunders, who was sent to Canada to take part in the wresting of that country from the French. To Cook was entrusted the task of taking soundings in the St. Lawrence between the Isle of Orleans and the northern mainland. The work was most carefully performed, and in its execution Cook showed but little regard for his own safety. At one time some Indians, acting under the direction of the French, shot out from the shore in canoes, and tried to capture the young Englishman. Cook, seeing the danger, made a dash for the Isle of Orleans. Nor did he gain the land a moment too soon, for, even as he ran his boat aground and leapt ashore, a swarthy Indian clambered over the stern. It was a narrow escape indeed, but Cook was not the man to be daunted by such an incident. So well was this work accomplished that he was entrusted with the sounding of the St. Lawrence below Quebec, and some of his charts are still in existence, testifying to the accuracy and conscientiousness of his labours. At the age of thirty-four he was appointed



to the important post of marine surveyor of Newfoundland and Labrador. Here he applied himself with zeal to the study of mathematics and of astronomy, thus fitting himself for the greater work that lay ahead of him. When, in 1768, a commander was wanted for the scientific expedition already mentioned, he was considered the most suitable man. His opportunity had come, and it found him in every way prepared for his new responsibilities.

Under Cook's own supervision the *Endeavour*, a small sailing vessel, formerly a collier, was fitted out. It was victualled for eighteen months, and among the eighty persons on board were Mr. Banks, afterwards Sir Joseph Banks, a wealthy patron of science, who became President of the Royal Society, and Dr. Solander, an eminent Swedish botanist.

The *Endeavour* set sail from Plymouth on 26th August, 1768. After calling at Madeira and Teneriffe, a south-westerly course was taken for South America, and on 13th November they anchored off the port of Rio de Janeiro. The Portuguese governor looked with eyes of suspicion upon the party. The idea of an expedition of that size being sent so many miles for the mere purpose of scientific observation was to him unintelligible. He was woefully ignorant of astronomy, and as Cook and his men sailed away on 8th December there is no doubt that he imagined them to be either fools or knaves—probably the latter. On the island of Tierra del Fuego, at the southern extremity of South America, Dr. Solander had a narrow escape from a tragic death. With Mr. Banks and ten others he went inland in search of plants.

The country was mountainous, and towards nightfall the cold became so intense that they all were filled with an overpowering desire to sleep. The Swedish doctor, thoroughly alive to the dangers of sleeping in the snow, urged the party forward, assuring them that he who slept would never wake again. Some were sent on ahead to kindle a fire at the most convenient spot. Heavy drowsiness fell upon those who were left behind, and, strange to say, Dr. Solander was the first to confess he could go no farther, and begged to be allowed to sleep, if only for a few minutes. The others, by every means in their power, persuaded him to keep struggling on; but at last he sank down to sleep. Luckily, a member of the advance party came back a few minutes later to say that a fire had been made a short distance ahead. The doctor was roused, and with the greatest difficulty was brought to the fire and revived. Two negroes, who also had been overcome by the desire for sleep, could not be induced to make the effort to reach the fire, and had to be left to their fate—a painless but tragic death.

On 14th January, 1769, the *Endeavour* entered the Strait of Le Maire, and in less than five weeks the dreaded Cape Horn had been rounded and the ship was sailing in the quieter waters to the west of Magellan Straits, and the spirits of all rose as they neared the sunny islands of the South Pacific. On 10th April the *Endeavour* cast anchor in Matavai Bay, on the Island of Otaheite, or Tahiti. This was the island where the "Transit of Venus" was to be observed, and on Tahiti three of the happiest months of the whole voyage were spent.

The natives received Cook with every show of friendliness. They came out in their canoes to meet the ship, holding aloft branches of trees as a sign of peace. They were simple and unsuspecting, their chief fault being that they were arrant thieves. It was not long before Cook discovered this weakness. A native chief was attracted by the gun that Mr. Banks was carrying. He straightway seized it; but the shock he received when, unknowingly, he pulled the trigger, was probably quite sufficient punishment. Everything that appeared wonderful to them they stole. The quadrant was carried off; and once, when some members of the expedition paid a visit to a neighbouring chief, and stayed for the night, they discovered in the morning that those articles of clothing which they had taken off and laid by them had been appropriated during the night by some inquisitive natives. But Cook did not allow their behaviour in this respect to spoil their friendly relationships. On the other hand, he allowed none of his men to ill treat the natives. One sailor, who stole some Indian arrows, was punished for the offence by a severe flogging.

At this time the natives of Tahiti were tall, good looking, with olive complexions, and white and regular teeth. They were in the habit of washing themselves three times every day. Tattooing of the body was also practised among them. This was done by a sharp piece of bone and a coloured liquid extracted from an oily nut growing on the island. They were very clever in the weaving of a coarse kind of cloth from a native fibre, and in the making of baskets of wickerwork. Their tastes were very simple. On one occasion Cook was

visited on board the *Endeavour* by no less a personage than the queen of the island. As usual, presents were exchanged. Hers were a hog and some plantains. In return she carried away proudly as her present—a doll! Soon after she got back to the shore a chief happened to see what she had been given. He was so filled with envy that, to restore peace between him and the queen, Cook had to find a similar doll for him.

The transit of Venus occurred on 3rd June, and most satisfactory observations were made. Then, having explored the greater part of the island, the expedition left Tahiti with regret on 13th July, accompanied by a chief of the island, named Tupia, and his son. Other islands near were visited, and to the whole group Cook gave the name of the Society Islands.

Some of the natives with whom they came into contact in these islands of the South Seas were not as friendly as those of Tahiti. A landing party on one island were surprised at the hostile appearance of a crowd of natives, who stood, lances and other weapons in hand, as though prepared to stop them from going ashore. No sooner did the boat's keel grate upon the beach than the islanders made a threatening rush towards them, and only by firing their guns over the heads of the natives were Cook's men able to drive them away.

One hundred and seventy-five years before this the Dutch explorer, Tasman, had discovered New Zealand, but nothing was known of the extent, shape, or inhabitants of the country. It was Cook who first explored its coasts, and proved that it consisted of two large

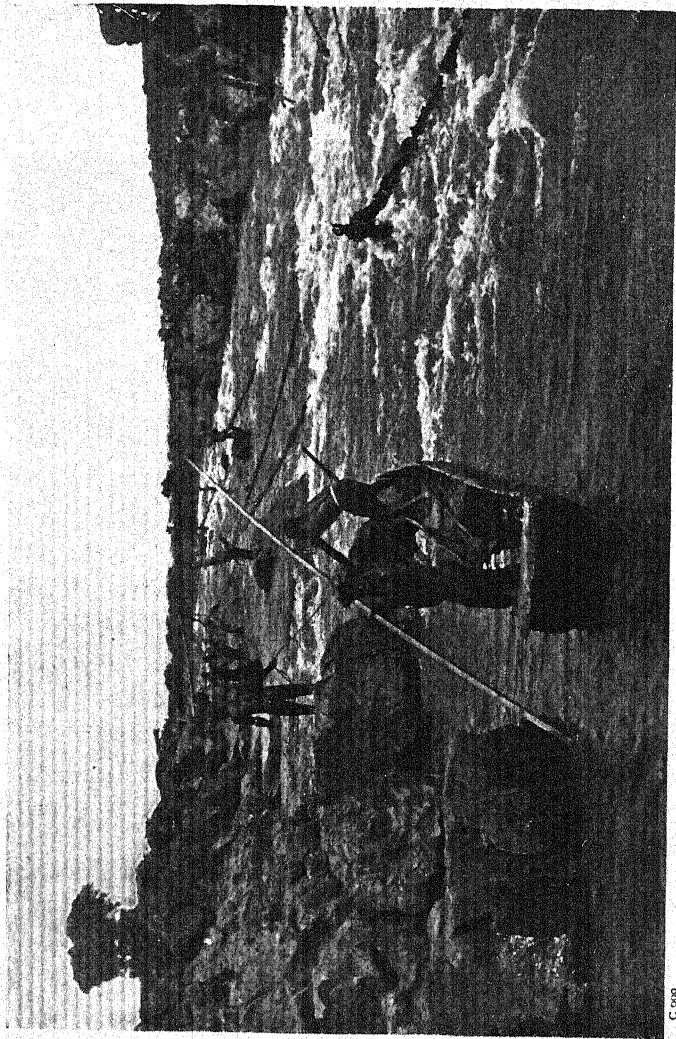
islands, separated by a narrow strait, now named after him.

The north-east coast of New Zealand was sighted on 7th October. The first meeting with the natives was by no means encouraging. Hitherto the firing of guns in the air had proved sufficient to cause any hostile natives to beat a hasty retreat; but here this was not sufficient, and the extreme measure had to be resorted to of shooting one of the natives. Whenever possible, Cook tried to avoid the killing of a single native. His was a peaceful expedition, undertaken in the interests of science, and he always censured any hostile action by members of the expedition. But the natives of New Zealand were particularly warlike in their attitude towards the explorers, and consequently several of them suffered a speedy death at the hands of the English.

At the southern end of Hawke's Bay there is a cape called Kidnapper's Point, so named by Cook because of an attempt made by the natives to carry off Tupia's son, Tayota. Natives had visited the *Endeavour* in their canoes to trade. While the attention of the sailors was engaged in bargaining, a New Zealander seized the boy, thrust him into his canoe, and paddled away swiftly towards the land. The alarm was quickly given and guns were fired over the retreating canoe. The native who was holding Tayota was struck by a shot, and the boy found himself free. He sprang from the canoe into the water, and, swimming as only South Sea Islanders can, was soon dragged by Tupia on board the *Endeavour*.

The next six months were spent in exploring the coast of North and South Island. To their horror they found

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THE BUSA RAPIDS ON THE LOWER NIGER, WHERE MUNGO PARK
WAS DROWNED IN 1806

that some of the natives of North Island were cannibals, for they came across a party of warriors feeding upon the remains of their vanquished foes. The natives brought forward human skulls for barter, and even used them for baling water out of their canoes. At this spot, to which Cook gave the appropriate name of Cannibal Bay, native women were seen evincing every sign of grief, their bodies scarred with self-inflicted wounds. This was their method of mourning for their husbands, who had been captured in war. Shocking as such a custom may have been, it shows us the better side of the nature of these islanders. They were by no means devoid of affection or intelligence. From hard stones and bones they fashioned axes, adzes, and chisels, and their spears were 16 feet long, and sharpened at both ends. Ear-boring was common amongst them, and into the orifice, which sometimes attained an enormous size, they stuck feathers or pieces of bone or wood. Their speech, their appearance, and many of their customs were similar to those of the natives of the South Sea Islands, from whence, indeed, they had migrated some six or seven centuries before.

On the last day of March, 1770, Cook left New Zealand, steering to the westward for Australia, or, as it was then called, New Holland. Land was sighted in less than three weeks, and on 28th April they anchored at a place to which the name of Botany Bay was given, on account of the profusion of trees and plants of all descriptions growing on its shores. They left this bay on 6th May, and for four months made their way steadily along the coast to the north, seeing many things in the

plants, animals, and natives to fill them with amazement. They saw giant gum trees with the huge clay nests of the white ant clustered on the branches, and were probably the first Englishmen to see that strange animal of Australia, the kangaroo. They shot one for food, and found the flesh not unpalatable. At one place where they put in, clouds of mosquitoes attacked them, and they were compelled to beat a hasty retreat from these stinging tormentors. The natives, seemingly less intelligent than those of New Zealand, were, on the other hand, more friendly. They painted their limbs white and red, and in many cases their "clothing" consisted only of a string of shells worn around the breast. One native was given an old shirt as a present, but the sleeves proved too much for him. He turned the garment over for some moments in his hands, and finally rolled it up into the form of a turban and placed it proudly on his head!

So far our voyagers had experienced no serious mishaps. They had had their share of hardships and dangers, but these were insignificant compared with the calamity which befell them some 700 miles to the south of Cape York, a calamity which, but for the strangest occurrence, might have sent every member of the expedition to a watery grave.

One evening the *Endeavour* was creeping northwards near the coast, when a sudden decrease in the depth of the water told of danger. The boat was accordingly turned seaward, and for a time the soundings were satisfactory. Then again the depth began to vary ominously, and presently, to the horror of every soul on

board, the *Endeavour* struck. The night was beautifully clear, and a hasty examination revealed the fact that the bottom of the ship was badly damaged. She was lying in a shallow basin in the rock, and it was while scraping over the encircling ledge that the greatest damage had been done, many of her lower planks having been torn away. Every effort was made to lighten the ship. Ballast, ammunition, arms, and casks were thrown overboard, and after many hours of anxiety the rising tide carried her over the ridge into deeper water. But she was leaking badly, and their plight seemed desperate. The pumps were set going, and every man during his appointed spell laboured with the energy of despair. But the intrushing sea was steadily gaining upon them. Luckily there was little wind, and, the surface of the sea being smooth, another method was tried to check the rising of the water in the hold. A spare sail, stuffed with wool and oakum, was dragged under the ship, in the hope that it would be forced into the hole by the pressure of the water. The experiment was successful, and the *Endeavour* was saved from sinking. Soon after this a breeze sprang up from the sea, the damaged vessel was steered cautiously towards the shore, and they were saved. But no one on board knew to what their salvation was really due; for when the ship was examined, there, plugged into the broken timbers, was found a huge piece of jagged rock, torn from the ledge as the *Endeavour* ground her way over it. And this it was that had saved them.

The rocky coral islets of the Great Barrier Reef were a constant source of danger during the remainder of

their voyage off the north-eastern coast of Australia, or New South Wales as it was first called by Cook. But they reached Cape York without further mishap, and were soon sailing westward amongst the islands of the East Indian Archipelago. Many of the crew were suffering from scurvy, and a change of diet from salt meat and mouldy biscuits was very desirable. So a stock of fresh meat and fruit was obtained, after some difficulty, from the Dutch traders at Savu, and on 21st September they left the island, steering towards Java. Batavia, at the western extremity of this island, was reached on 9th October, and here Cook decided to make a long stay while the *Endeavour*, which was badly in need of repair, was thoroughly overhauled.

At this time Batavia was a low-lying town, cut up by canals of stagnant water, the pestilential air from which, owing to the excessive heat, made it a hotbed of malaria. A terrible fever broke out amongst the members of the expedition, and soon every man was down with it. The Indian boy, Tupia's son, from far-distant Tahiti, died; and Tupia, his fever aggravated by grief at Tayota's death, outlived him by only a week. Then the ship's surgeon died, and few days passed without a death. To the gallant leader those weeks at Batavia must have been a terrible time. When at last, on 27th December, he sailed away from it, over forty of his men were lying seriously ill, and within six weeks twenty-three of these had died.

On 15th March, 1771, the Cape of Good Hope was reached, and its pure, invigorating air soon restored those still suffering from the effects of Batavia. It is interest-

ing to record that during their stay here a settler came into Cape Town, from his home in the interior, accompanied by his children. The journey had occupied him fifteen days. On being asked why he had not left his children with a neighbour, he smiled grimly. "From my home to my nearest neighbour is a five days' journey," he replied. The story shows how thinly Cape Colony was peopled with settlers at the time.

Cook left Cape Town on 14th April, and anchored in the Downs off Deal on 12th July, 1771, having been away from England two years and nine months.

A year later Cook started on a second expedition to the South Seas, but this journey cannot be dealt with fully. For many years men had believed that there was a mighty continent covering the whole of the South Polar region, a continent which, for some reason or other, was imagined to be fabulously rich in precious stones and metals, and inhabited by a highly civilized race of people. To discover this continent was the main purpose of Cook's second voyage. He pushed his way far to the south till he was stopped by the ice barrier, and by his voyage for many months in the Antarctic Ocean proved conclusively that no such continent existed. Then for nearly three years he cruised in the Southern Seas, making many discoveries, and adding extensively to the world's scientific and geographical knowledge.

Since the time of Elizabeth, merchants had been very anxious to discover a north-west passage to India and the East Indies by way of Baffin Bay and the north of Canada. A large reward was offered for those who

should discover such a route, and in July, 1776, Cook started on his third and last voyage—his main purpose to determine if such a passage was possible. He intended to make the attempt, not from the Atlantic, but from the Pacific Ocean by way of Behring Strait, and so work eastward into the Atlantic.

The first part of this voyage may be passed over briefly. From the Cape a south-easterly direction was taken, various islands being discovered in the Southern Ocean. Then a call was made on the coast of Tasmania, and Queen Charlotte Sound in New Zealand was reached on 11th February. Here Cook learnt how some of his former crew had been massacred by the natives. His policy, however, was always to trust the natives, and the gruesome details of this massacre made but little difference to Cook in his behaviour towards these or other natives of the South Seas. Had he been more cautious, more careful of his own life, his third voyage might not have had such a tragic ending.

Cook left New Zealand towards the end of February, and for ten months cruised in the South Pacific, discovering many new islands, and revisiting those he had discovered on his previous voyages. One day, while steering towards the Society Islands, from which they were distant some 600 miles, a small canoe was seen containing four natives. On board the ship was a native of the Society Islands, and the dusky occupants of the canoe were recognized by him as belonging to one of the islands in the Society group. Six hundred miles from their home in a frail canoe! How was this? Their explanation was that while fishing off the shores of their

own island a storm had suddenly arisen, driving them out to sea. Dexterous handling of the canoe had prevented it from being swamped. But when the storm had abated there was no sign of land, nor were they sure of the direction in which it lay. For days they drifted helplessly, exhausted by hunger and thirst, till at last they chanced to be rescued by Cook's ship, the *Resolution*. Such incidents are not uncommon. On one occasion thirty natives from the Philippines were found drifting in an open boat 900 miles from those islands, from which they had been driven many weeks previously by a fierce storm! From Tahiti, Cook sailed away to the north, calling at a group of islands to which he gave the name of Sandwich Islands. Then, much to the sorrow of his men, sunny skies and soft breezes were left behind, and the serious work of the voyage was begun. Cook called at several places on the north-west side of America, and his men were only too glad to barter with the natives for furs, for the cold was becoming more intense daily. Old iron tools and scraps of metal, especially of brass, were readily accepted by the natives, and a sailor who had any brass buttons still left upon his clothes could easily exchange them for a warm beaver skin. But cold was not the only hardship of this part of the voyage; the food supply was very scanty. Cook pushed on slowly to the north, passed through Behring Strait, and spent nearly a month sailing in the Arctic Ocean searching for a passage eastwards, with no success. About the seventieth degree of latitude his progress was checked by a great barrier of ice. The summer was passing, and the

attempt for that year had to be abandoned; so he set sail to the south, and at the end of November the *Resolution* dropped anchor in a harbour on the Island of Hawaii, in the Sandwich group.

There is a story current that many years before this a wonderful god had lived on the Island of Hawaii, who, before his departure, promised that "he would come again on an island bearing coconut trees". It is highly probable that the simple natives thought Cook was this god come back to earth once more. His ship, larger than anything they had seen afloat before, was surely "the island", and the tall masts were the "coconut trees". At all events they behaved towards him as if he had actually been a god. They flocked in vast numbers to see him, and prostrated themselves on hands and knees before him. Curious ceremonies were gone through, in all of which Cook was the central figure. Their behaviour must have puzzled the brave commander greatly, especially when they led him to the top of a huge pile of stones—a kind of altar, and having placed a scarlet cloth around him, proceeded to anoint his hands and face, afterwards presenting him with a hog as an offering.

On 4th February Cook sailed from this bay, but unfortunately a few days later he was compelled to put back again; for during a storm the mast of the *Resolution* had suffered considerable damage, and repairs were necessary. But this time his reception by the natives was very different. Whether they could not understand how a storm could do damage to a god, or whether they had begun to suspect that after all he was only a mortal being,

we cannot say. Anyhow, all trace of reverence had vanished. They appropriated his goods—small ones at first, but more valuable later. The climax was reached when they plundered one of the ship's boats and stole another, the cutter of the *Resolution*. Cook decided to teach them a lesson.

Accompanied by nine marines and a lieutenant he rowed ashore. He went to the tent of the king and invited him on board, intending to keep him there until the missing boat should be returned. But the natives seemed suspicious, and persuaded their king to refuse Cook's invitation. The situation became grave, and orders were given for the nine men to line up on the beach, with arms in readiness. Then an unfortunate accident happened. A chief was killed by a stray shot from one of the ship's boats. The news of this filled the islanders with fury, and they seized their spears and shields. The threatening attitude of one native impelled Cook to fire. The ball, however, did not penetrate the islander's war mat, and the crowds of natives, encouraged by this failure, dashed forward. No accounts agree exactly as to what followed in the general confusion. The lieutenant was badly wounded from a spear thrust, and four of the marines were killed at the water's edge. Cook, on gaining the beach, turned his back upon the islanders and signed to those in the boat to cease their fire, hoping, no doubt, that even then it might be possible to pacify the natives. But that moment was his last. A spear struck him, and he fell forward into the water. Within a few moments the brave captain breathed his last, brutally murdered by the infuriated

natives. His body, recovered from the islanders after some difficulty, was committed to the deep sea on 14th February, 1779.

Thus died one of England's greatest discoverers. Far in every direction he had voyaged on the Southern Ocean, and by his achievements had greatly increased the bounds of human knowledge. He discovered many islands, explored thousands of miles of unknown coasts, and left behind him a reputation for enterprise and a nobility of character which endears him for ever to his fellow countrymen.

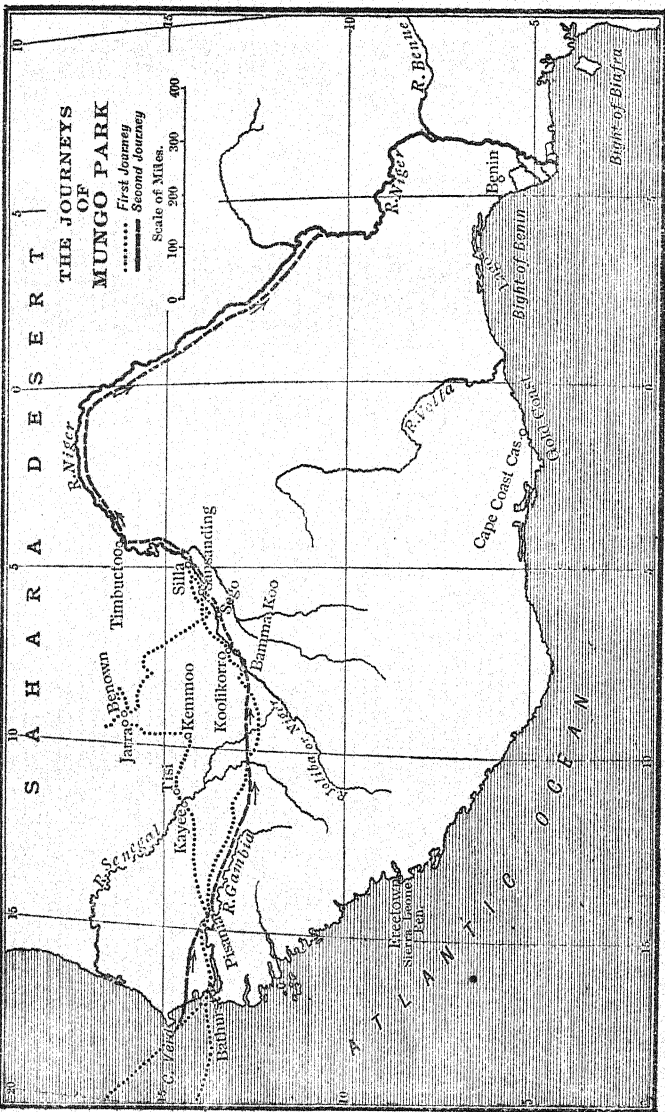
Mungo Park

Mungo Park was born in Scotland, near Selkirk, on 10th September, 1771. At the age of fifteen he entered upon a term of apprenticeship to a surgeon of Selkirk, afterwards attending lectures for three sessions at Edinburgh University. He was keenly interested in natural history, and made several scientific tours with his brother-in-law, a famous botanist, by whom he was introduced to Sir Joseph Banks. Through the influence of this wealthy patron of science, Mungo Park, at the age of twenty, was appointed assistant surgeon on board the *Worcester*, an East Indiaman bound for Sumatra. There was in existence at this time an Association for the Promotion of Discovery in Africa. This association had already sent out one expedition for the exploration of West Africa; but the attempt had ended disastrously, the gallant leader, Major Houghton, having lost his life after terrible hardships and sufferings. The society decided

THE JOURNEYS
OF
MUNGO PARK

..... **First Journey**
..... **Second Journey**

Scale of Miles.



to send out a second traveller, who was to land on the west coast, make his way inland to the Niger, and having solved the mystery of the course of this stream, was to estimate the possibilities of trade by visiting the chief native towns. To Mungo Park, inspired with enthusiasm for knowledge and love of adventure, the leadership of such an enterprise was fascinating in the extreme. He offered himself to the association for the commission, and, much to his own satisfaction, was accepted. He sailed from England on May, 1795, and a month later the vessel cast anchor at Jillifree, at the mouth of the Gambia. From this port he proceeded up the river for a distance of some 200 miles to the town of Pisania, where he stayed for nearly six months as the guest of Dr. Laidley, ill for a third of the time and making preparations for his journey inland to the banks of the River Niger during the remainder.

He was then busily engaged every day in collecting information from native traders on all subjects relating to the countries through which he would travel, and in making himself master of the language spoken by the Mandingoes, the natives of Senegambia.

At length, the rainy season being at an end, everything was in readiness for a start on 2nd December. The party was quite small, consisting only of seven persons, two being negro servants, Johnson and Demba, whom Park had secured on the recommendation of Dr. Laidley. Johnson had lived some time in England, and spoke both Mandingo and English; while Demba, who had been Dr. Laidley's own faithful "boy" for many years, was acquainted with the language of a large tribe in the

interior, and as an interpreter, therefore, his services would be very valuable. In addition to these Park was accompanied by a Mohammedan black, two slave merchants, and a negro blacksmith who was returning to his native country of Kasson, which lay many miles inland. Park took with him a horse for himself and two asses for his servants and a stock of necessities. The "necessaries" consisted of beads, amber, and tobacco for barter, a change of clothes and linen, and an umbrella for his own comfort; and in addition he carried two compasses, a thermometer, a gun, and two pistols.

Dr. Laidley and two English merchants of Pisania rode with Mungo Park for the first few miles of the journey, and when they bade him "Goodbye" and "God-speed" on the afternoon of the second day they felt that they were looking upon the face of the fearless traveller for the last time. They knew something of the dangers awaiting the explorer in that part of Africa—dangers from savage tribes, from wild beasts, and from the treacherous climate. A well-equipped and well-armed expedition of fifty men might possibly succeed, but what chance of success could a solitary traveller have, accompanied only by two negro servants, who might desert him at the first critical moment? Such were the thoughts of Dr. Laidley and his friends as they turned their horses' heads towards Pisania.

At noon on 5th December Mungo Park arrived at Madina, a village of about a thousand native huts, encircled by a defensive ring of stakes and bushes. This was the capital of a petty kingdom, whose ruler, seated on a mat before the royal hut, received the travellers

with kindness. He readily gave his permission for them to pass through his territories, and, moreover, provided them with a guide. Before they departed he warned them of the dangers that lay ahead, and prayed, in native fashion, for their safe return. A few miles beyond Madina a sheep was bought for food at a small village. After the animal had been killed and skinned, Mungo Park found Johnson and another negro quarrelling over the horns. Had he not interposed, and settled the dispute by giving one horn to each, the consequences might have been serious. The incident was trifling, its cause curious. It seems that the negroes of West Africa are very superstitious, and believe fully in the efficacy of certain charms. The most potent in their eyes are those sold to them, only too willingly, by the Mohammedan priests, consisting of pieces of wood, leaves, or paper with texts from the Koran written upon them. Such charms are called *saphies*, and the natives often rely on them for protection from danger and for success in any enterprise. The two negroes, then, wanted the horns as convenient receptacles for their *saphies* or charms. Near the entrance to another village Mungo Park gained an insight into another curious native custom born of superstition. Hanging upon the boughs of a large tree he saw several strange garments, which he learned were the clothes of Mumbo Jumbo, a demon of the woods. If a woman in the village did anything to anger her husband she was punished by Mumbo Jumbo; in other words, she was punished in the presence of the other villagers by her husband, or by any of his friends, dressed in the clothes of Mumbo Jumbo. The ceremony was the

occasion for much revelry—to all but the unfortunate victim.

After leaving the village of Kolor the route lay for two days over a region where water was very scarce. Near one of the watering places Park observed a tree covered with what he thought at first were the strangest leaves he had ever seen. On getting nearer, however, he saw that the "leaves" were fragments of cloth of all shapes, sizes, and colours. Probably this was the method originally adopted by the natives for telling travellers of the nearness of water. Superstition gradually grew up around the custom, until no native thought of passing the spot without hanging up a scrap of cloth as an offering to the deity of the desert. Park and his followers were about to encamp at this watering place when the remains of a recent fire were seen upon the ground. Fearing that the place was the resort of robbers, who might still be lurking near, the others urged Park to push forward to the next watering place. This was reached at nightfall, and the camp pitched well out of gunshot range from the nearest clump of bushes.

On 21st December Mungo Park arrived at Fatteconda, the capital of the kingdom of Bondou, where he stayed as the guest of a native trader. The King of Bondou received him at first beneath the shade of a large tree outside the village, but in the evening Park visited him in his citadel. Presents of amber and tobacco failed to satisfy the dusky monarch, who looked with eyes of envy on Park's umbrella. But even with that the king was still unsatisfied. Park's blue coat, with its row of bright yellow buttons, next roused his envy. The traveller

was naturally loath to part with it, but feeling that it would be expedient at all costs to please the king, who a year or two before had plundered Major Houghton of everything, he laid the coveted garment at the monarch's feet. The king in return gave Park provisions, together with a small quantity of gold.

After leaving Fatteconda, and while travelling through a country of treacherous natives, they marched only at night, resting in concealment during the day. These night journeys were strange experiences to Park. The pale moonlight revealing the dusky form of a hyena or leopard as he skulked across their path: the awful stillness at times when they halted, a stillness broken now and then by the deep voice of some beast of the forest: and in addition that lurking sense of mystery, of uncertainty, of hidden dangers always around them—these were the things that made this part of the journey ever memorable to Park.

Proceeding in this fashion for some miles, they entered a native kingdom lying immediately to the south of the River Senegal, and here Park had his first experience of exorbitant demands by a king for permission to pass through his territory. He was obliged to hand over all the gold he had received at Fatteconda as duty to the ruler of this country, and not until his various packages had been opened, and the king had made his own selection from their contents, was he allowed to proceed.

Soon after entering the neighbouring kingdom of Kasson they came to a small village called Jumbo, the birthplace of the blacksmith who was returning to his native home from Pisania. The reception accorded the

simple negro by his friends and relatives was whole-hearted and joyous. Amidst much singing, shouting, and dancing he walked towards the hut where lived his aged parents. His blind mother was led out through the crowd of natives to welcome her son. On reaching him she passed her hands softly over his features, her face showing her joy at his safe return.

The King of Kasson received Park with every sign of friendliness, making him a present of a white bullock—a special token of favour—and providing him also with an escort of native soldiers to the frontier. The adjoining kingdom was Kaarta, the capital of which Park entered on 12th February. A messenger came from the king welcoming the white traveller, and a hut was set apart for his accommodation. Most of the natives had never seen a white man before, and Mungo Park was for several hours the victim of native curiosity. He tells us in his journal that the hut was cleared no less than thirteen times. The king, whose name was Daisy, received Park in state. His “throne” was a mound of earth covered with the skin of a leopard, and upon this he sat with his warriors on his right hand and a line of women and children on his left. He tried to dissuade Park from going farther, because of the dangers ahead, war being imminent between his own country and the adjoining kingdom of Bambarra. The result of the King of Kaarta’s warnings was that Mungo Park decided to alter his course slightly. He determined to pass through the Moorish kingdom of Ludamar, and sent to Ali, the ruler, for permission to travel unmolested through his realm. While waiting for Ali’s answer in

a small village, whither he had gone to escape from the crowds of curious natives who thronged round him at Dallī, a party of Moors rode up. They had come, they said, to take the white traveller to their chief, Ali, who was at his camp at Benown. Objection was useless. There was nothing for it but to submit with the best grace possible. So Mungo Park, accompanied only by his negro servant, Demba—Johnson had left him—found himself practically a prisoner. The journey northwards to Benown occupied several days. Water was scarce, and in the intense heat his sufferings were great; but they were light compared with the treatment he received at Benown.

This camp, an assemblage of dirty-looking tents with a large number of camels, cattle, and goats feeding around on the slender herbage of the sandy plain, was reached on 12th March. The chief, Ali, an old man with a long white beard and a typical Arab cast of features, was sitting in his tent on a black leather cushion. After learning from his attendants that the traveller could not speak Arabic, he relapsed into silence, while he regarded his Christian visitor with eyes of suspicion and cruelty. A hut was set apart for Park's use, and there in that Moorish camp he was kept prisoner for many weeks, having to endure daily the studied insults and indignities that his captors heaped upon him. He was a stranger, he was unprotected, he was a Christian; and for these reasons, together with the suspicion that he might be a spy, Mungo Park was treated most cruelly by the Moors. Everything of value that he had was taken from him. His compass was to

Ali a thing of mystery. He could not understand why the needle always pointed in the same direction, viz. towards the Sahara. Park, anxious to increase the Moor's belief that there was something magical about the instrument, explained that his mother lived beyond the Great Desert, and the needle always pointed in that direction as a guide for his return. The mystery was too deep for Ali, who, luckily for Park, refused to keep the instrument.

The heat during his captivity at Benown was excessive. Day after day a hot, scorching wind blew from the northern desert, and a fierce sun beat down upon the burning sands. The heat was the more intolerable owing to his difficulty in getting water. The small quantity that was allowed him daily was quite insufficient for his needs; but to get his water bottle replenished at one of the wells was no easy matter. Whenever the Moors caught sight of Demba attempting to fill his skin they immediately drove him away. One night Park went out himself to get water. He was driven from one well, and then from another, until he began to despair. Presently he came to a well where there were only an old man and two boys. The man drew up the bucket, and was about to fill Park's bottle, when he suddenly recognized whom he was helping. A follower of the Prophet to help a Christian! He dashed the water down and made signs to Park that he might quench his thirst from the trough with the cattle.

Added to his other misfortunes there was always the dread uncertainty of his ultimate fate at the hands of the Moors. One day a council was held, and Park

learned from a Moor that they had been trying to decide whether they should put him to death at once, cut off his right hand, or put his eyes out! Ali, however, finally resolved that he would do nothing until his queen, Fatima, had seen the Christian. Fortunately she was quite friendly towards Park, and by her influence his horse and many of the things that had been taken from him were restored.

Towards the end of May the rainy season approached, and the camp at Benown broke up. The majority of the Moors went north to the southern limits of the Sahara, while a party of 200 horsemen were sent south to Jarra. Park succeeded in getting Ali's permission to accompany this party, and he started southwards with the Moorish horsemen, sorrowful but hopeful: sorrowful, because he had lost his faithful negro, Demba, whom Ali had taken as his slave; hopeful, because he thought escape might now be possible.

On 1st July his chance occurred. He was in a camp to the south of Jarra with four Moorish soldiers who had been sent by Ali to bring him back. He hastily put together a small bundle of clothes, and at night, while the Moors were asleep, crept from the camp, mounted his horse, and rode off into the forest. He had with him his compass, and by it directed his course eastwards, hoping to reach some town or village in the kingdom of Bambarra. At first he suffered greatly from thirst, and tried to soothe his parched tongue and lips by chewing leaves, but they were bitter and did nothing to relieve him. Towards nightfall a storm of rain came on. He stretched out a cloth to catch the precious drops, and

afterwards squeezed the moisture from it. A few minutes later the silence of the forest was broken by the croaking of frogs, a welcome sound, for it assured him of the presence of water! When morning dawned he saw before him big, shallow pools, and both traveller and horse drank deeply.

Soon after this he entered a village to try to procure food. But none was to be got, and he was just about to leave the place when he chanced to pass a small hut at the door of which an old negro woman sat spinning. She took pity upon him, and gave him food for himself and a little corn for his horse. As a reward for her kindness he gave her one of his handkerchiefs. By this time the villagers had begun to gather in a large crowd round the hut. Park saw amongst them several Moors, and afraid lest he should be recognized by any of Ali's men, he left the village as soon as possible. That night he spent in the woods, with his saddle for a pillow.

On 6th July he came to a village on the borders of Bambarra, where he was given food and shelter by a friendly native, and a day or two later he fell in with a party of eight negroes who were proceeding to Sego, the capital of Bambarra, to offer their services to the king of that country. Park was thankful to be able to accompany them, as Sego was the town for which he was making. He had great difficulty, however, in keeping up with them. His horse was so weak, that it would have been cruel to attempt to ride the poor creature. He had to walk, therefore, driving it before him.

Near Sego they met a caravan of slaves, bound for Morocco. There were seventy in all, divided into ten

gangs, the members of each gang being tied together with thongs of bullocks' hide. At this time slave traffic was a very lucrative business for traders in West Africa, a ready market being found for the slaves in America. Slavery has not yet ceased to exist, although it has been abolished for some years from all the great Christian countries of the world. When within a few miles of Sego, Mungo Park, for the first time, saw the River Niger. "See, water!" shouted one of the negroes with him. Park looked and saw the glittering surface of a broad and noble stream flowing to the north-east. He hastened to its banks, and, having drunk of its waters, offered up a prayer of thanks for his preservation from the many dangers of his journey.

Sego, a town of 30,000 inhabitants, stood on the north and south banks of the Niger. Above the flat roofs of the low houses of clay Park saw the tall towers of Moorish mosques rising on all sides. He was not allowed to present himself before the king. The royal residence was on the other side of the river, and Park had to wait for the king's permission before he could cross. He waited in a neighbouring village, anxious to escape from the attentions of the crowds of curious natives of Sego. At this small village he rested in the hut of two native women, who, as they sat spinning, chanted a song, of which this is a translation:

The winds roared and the rains fell,
The poor white man, faint and weary, came and sat under our tree
He has no mother to bring him milk, no wife to grind his corn.

It is interesting to notice that throughout his journeys

in West Africa Mungo Park experienced nothing but kindness from the native women. No matter how poor they were, he found them always ready to give him something to eat, water to drink, and a mat to lie on.

After several days a messenger came from Mansong, King of Bambarra, bringing a present from the king of 5000 cowries (these are small shells used as money in West Africa), but telling Park it was Mansong's wish that he should depart at once from the neighbourhood of Sego. The order from the king was probably due to the fact that he did not fully understand why this white traveller had come into his kingdom. The significance of the term "exploration" was a mystery to him. He no doubt suspected Park of being a spy from one of the neighbouring kingdoms, and adopted this means of being rid of him.

Accompanied by a guide, Mungo Park left Sego on 24th July, travelling in a north-easterly direction to the town of Sansandig, a Moorish caravan centre. From here their way lay across a plain with scattered clumps of bushes. Suddenly the guide stopped and pointed to a bush. There, with his huge head resting between his paws, his eyes fixed upon the travellers, crouched a lion. Park, his horse being too fatigued for a canter, rode slowly by, expecting every moment that the beast would spring; but, much to his relief, the animal allowed him to pass unmolested. The next morning, his horse was too exhausted to move. Park took off the bridle and saddle, and, having placed a good feed of grass near the horse's head, proceeded on foot to a village called Kea, on the Niger. At this village the guide left him, and

he was once more alone. He got as far as the village of Silla, a few miles farther down the river, and then decided to return. He had hoped to reach the great inland trading centre of Timbuctoo, but the attempt had to be abandoned. Sick, half-naked, with no articles left him for barter, and all alone, he knew that he would indeed be fortunate if he ever got back to civilization again. The tropical rains, too, had begun, making travelling even more difficult.

It is not possible to go into details of the first part of his return journey. As in the journals of many other explorers, the record becomes almost monotonous by the repetition of hardships, difficulties, and dangers. Mungo Park left Silla at the end of July, and for six weeks he struggled on, enduring misfortunes and privations such as few explorers have experienced. True, he recovered his horse at a village soon after he had started on his homeward journey, but the animal was much too weak to be ridden.

As he proceeded through Bambarra he found that Mansong had sent out messengers to capture him. From Sansandig he had to be off before daybreak to escape them, and when he reached the next village people met him at the gates and urged him not to stop, but to go on westward, as Mansong's men were then within the town. From village after village he was repulsed by the hostility of the inhabitants. He was weary, but there was little rest; he was hungry, but there was little food, and for three days he subsisted on uncooked corn.

On 20th August he arrived at Koolikorro, a market for salt. A merchant who had once been the slave of

a Moorish master gave him a supper of rice and a bed for the night. It was the first good meal and sound sleep he had had for many days. An amusing incident occurred at Koolikorro. His native host asked Park for a charm, or *saphie*, as a protection against attacks from evil men. Park willingly consented, covering the native's writing-board on both sides. No sooner had he handed it back than the negro washed off the writing carefully into a small calabash, and swallowed the contents of the calabash when all traces of writing had disappeared from the board. Evidently he was anxious to get the full effects of the charm.

Four days later, when within a few miles of Sibidooloo, a border town of Manding, he was stopped by a party of seven armed robbers. They took away his horse, and stripped him of all his clothes, giving him back a shirt, a pair of trousers, and his hat. It was lucky they returned the last article, for within its crown Park carried his daily notes of the journey. The robbers even examined the boots he was wearing; but as they were in a hopeless condition, the sole of one being held in position by a bit of leather from an old bridle, Park was allowed to retain them.

On reaching Sibidooloo he was received kindly by the chief magistrate, who promised that his horse and goods should be returned. The magistrate was true to his word, for within a week both clothes and horse were brought back. During this time Park had been staying at a village near Sibidooloo, owing to the great scarcity of food in that town. So bad was the famine that women brought their children and sold them as slaves

to the chief magistrate in return for enough provisions for a certain number of days for the rest of the family. Before leaving this village Mungo Park gave his horse to his landlord, and sent the bridle and saddle to the chief magistrate of Sibidooloo as a small return for his kindness.

On 16th September he came to Kamalia, and he learned that a caravan for Gambia would be starting from here within the course of a week or so. He decided to accompany it to the coast. While he was at Kamalia he had his second severe attack of fever, and for five weeks his condition was critical. But thanks to his own strong constitution and to the kindly attention of his landlord, Karfa Taura, he slowly recovered.

The caravan consisted of seventy-three people, thirty-five of whom were slaves; and during this journey of 500 miles to the mouth of the Gambia, Park saw something of the sufferings which these unfortunate captives have to endure while on the march. Each slave had a heavy load to carry, and hour after hour in the sweltering heat he had to trudge on, any sign of slackness bringing upon him either curse or blow from his driver. One girl slave sank down upon the road from sheer exhaustion. She was whipped, and tottered forward a few paces, only to fall again. Then she was tied to the back of an ass, and later was placed in a rough kind of litter borne by two other slaves. As she did not regain her strength, however, she was left to perish by the roadside.

On 10th June Mungo Park arrived at Pisania. His friends there had long since given up all hope of seeing

him again, and great was their joy on beholding him once more. Park was soon furnished with a new outfit of clothes by Dr. Laidley, and few would have recognized in the smartly dressed, clean-shaven, well-groomed visitor of the doctor the wearied traveller with long beard, unkempt hair, and ragged clothes who so recently had ridden into Pisanía.

He secured a passage in a slave vessel bound for South Carolina. The ship called at Antigua, and from there he sailed to England in a packet boat, arriving at Falmouth on 22nd December, 1797, after an absence of two and a half years.

For some time after his return to Scotland he practised as a doctor. The life, however, did not satisfy him. His restless nature craved for adventure. Often as he rode across the bleak Scottish moors to visit some poor patient his thoughts were busy with his past experience in distant Africa. He recalled those months of imprisonment amongst the Moorish tents, his escape, and his lonely wanderings. His sufferings had been great, the object of the journey not achieved; but, filled with the zeal of the true explorer, he was ready to risk everything in a second attempt.

And this second attempt to solve the mystery of the Niger's course cost him his life. With a large company of soldiers, a big stock of merchandise carried by a troop of carefully selected asses, and three able and trusted Englishmen as companions, it looked as if the expedition was bound to succeed. But misfortunes overtook them daily. The journey was begun in the rainy season, and one by one the soldiers were carried off by fever. Then

two of his friends died, and by the time the canoe was constructed for the voyage down the Niger only four white men remained alive. The end came at a narrow point on the river in the kingdom of Yaour. *His Majesty's Schooner Joliba*, for so the canoe had been christened by Park, was attacked by a vast crowd of armed natives. Stones and lances were hurled at its occupants. Two slaves were killed, and Park, seeing that further resistance was hopeless, leaped into the river. The day before his Moorish guide had been captured by the king. On being released, this man gathered together all the particulars of the incident, and it was from his journal that the details of the sad death of the explorer were learned. The name of Mungo Park will ever rank high amongst those who have given their lives in their endeavours to reveal the secrets of the "Dark Continent".

The Great Interior

In no other country, perhaps, has the work of the explorer been so difficult and arduous as in Australia. A hundred years ago very little was known of the interior of this vast island, almost as large as the whole of Europe. We do not know a great deal now, for there are still many thousands of square miles unexplored. But we do know that it consists for the most part of desert, a dreary uninviting region of excessive heat and prolonged droughts, and this knowledge we owe to that gallant band of Australian explorers who have pushed their way, in spite of untold hardships and dangers, into the for-

bidding interior of the great island continent. Many of them lost their lives. Some died from lack of food or water, others from disease, while many were slain by hostile natives. But they were heroes every one. —

The first settlement in Australia was at Botany Bay. There, in the year 1788, a party of convicts was landed. At the outset the difficulties of inducing these men to take kindly to agricultural pursuits were indeed great; yet gradually, by strenuous efforts on the part of different governors, progress was made. The number of colonials slowly increased, and in 1813 some of the more enterprising of these pioneers began to wonder if bigger, and perhaps better, pastures for their flocks and herds might not be found beyond that natural rampart, the Blue Mountains, which hemmed them in on the west. An expedition set out, and the mountains were crossed. There, stretching away miles to the west, were fertile plains. A road was speedily constructed, and soon colonists with their flocks and herds were making their way over it—the first approach to the vast interior.

Explorations west of the mountains followed quickly. In 1824 a young colonist named Hume, accompanied by a friend and six convicts, crossed the south-west corner of the continent from Sydney to Port Phillip. Their provisions and other necessities were carried in two carts drawn by bullocks, and when they came to the Murrumbidgee, so broad and strong was the current that they were forced to make punts of the carts by stretching their tent sheets beneath them. They and the bullocks had to cross by swimming. South of this river the country was covered with dense forests, so thickly

wooded and so extensive that they despaired of ever reaching the southern coast. Leaving behind the two carts, which hampered their progress, they toiled on, and within two months of leaving Sydney saw the blue waters of the harbour on which now stands the city of Melbourne.

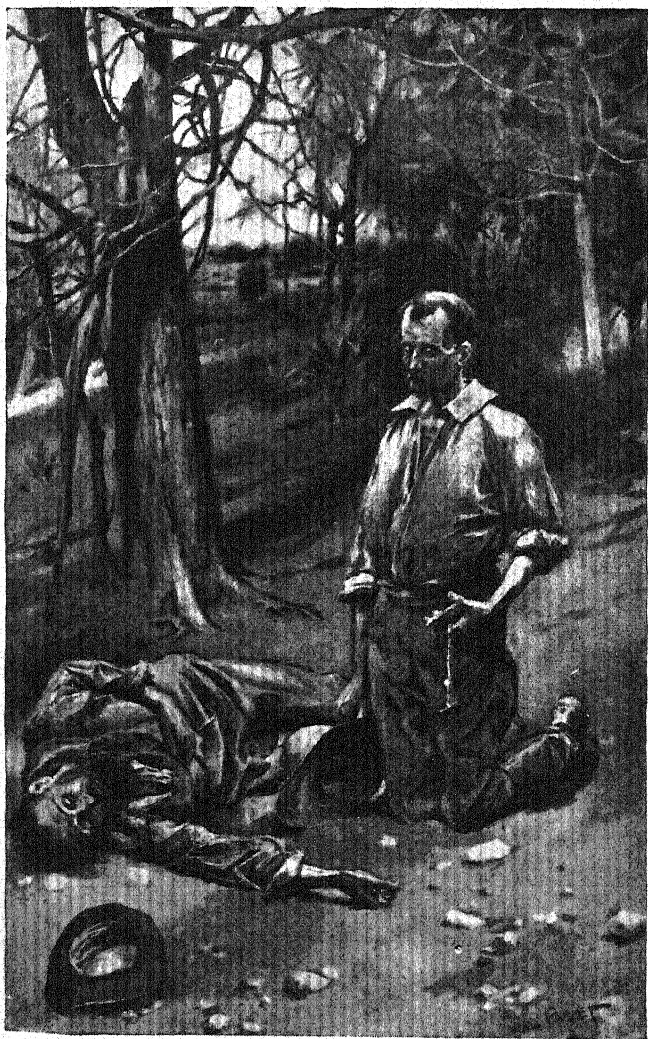
Some of the questions which these early explorers of New South Wales sought to answer were these: Did those rivers rising on the western slopes of the Blue Mountains eventually find their way to the sea? If so, in which direction? Or did they gradually decrease in volume, only to lose themselves in marshy swamps? In 1817 the Macquarie River had been explored for some miles, until it had apparently ended in a reed-studded marsh. Were the courses of all the westward-flowing rivers similar to this? It was Captain Charles Sturt, the "Father of Australian Exploration" as he has been called, who was the first to answer these questions.

The year 1826 was a year of great drought. The time, therefore, was favourable for exploration, for the marshes would probably have dried up. On 10th November, 1826, Sturt started, accompanied by Hume, who, as we have seen, had just those qualities which go to make the successful explorer. With them were two soldiers and a party of convicts. Safely stowed in their boat, which was being hauled on a dray, were provisions for six months. They found, however, that the marshes were not so dry as they had anticipated. Instead, the swamps had become evil-smelling stretches of mud, and the tall strong reeds which grew thickly at these places made it impossible to force a way across them. / But Sturt did

not give up at once. He made a circuit around the marsh, and, striking a narrow creek a few days later, followed it till it brought him to the banks of a wide and full river. He and his companions were overjoyed at the sight: happy in the discovery, happy in the thought of an abundance of cool and refreshing water for themselves and for their exhausted cattle. But the interior had in store for them one of its usual bitter disappointments. The water was not drinkable, owing to the presence of salt springs in the bed of the river! To this river Sturt gave the name of the Darling, and after following its course westward for about 90 miles he had to return. Without a good supply of fresh water the life of every man was in jeopardy, and of fresh water there was but the scantiest supply. Whither did the Darling flow? Three years elapsed before Sturt supplied the answer.

On 3rd November, 1829, he started on a second journey into the interior. On this expedition Hume did not accompany him. The party consisted of Sturt, a friend, and several convicts. Great precautions were taken to ensure the success of the expedition. The dray which was used in the overland part of the journey carried, in addition to a goodly store of provisions, a boat that could be easily put together as soon as navigable water was reached, a still for obtaining fresh water, and fire-arms for each member of the party. A course was first steered for the head waters of the Murrumbidgee, and then for many days they followed the tortuous course of this river. But their progress was very slow. The banks were often low-lying and marshy. They sought to

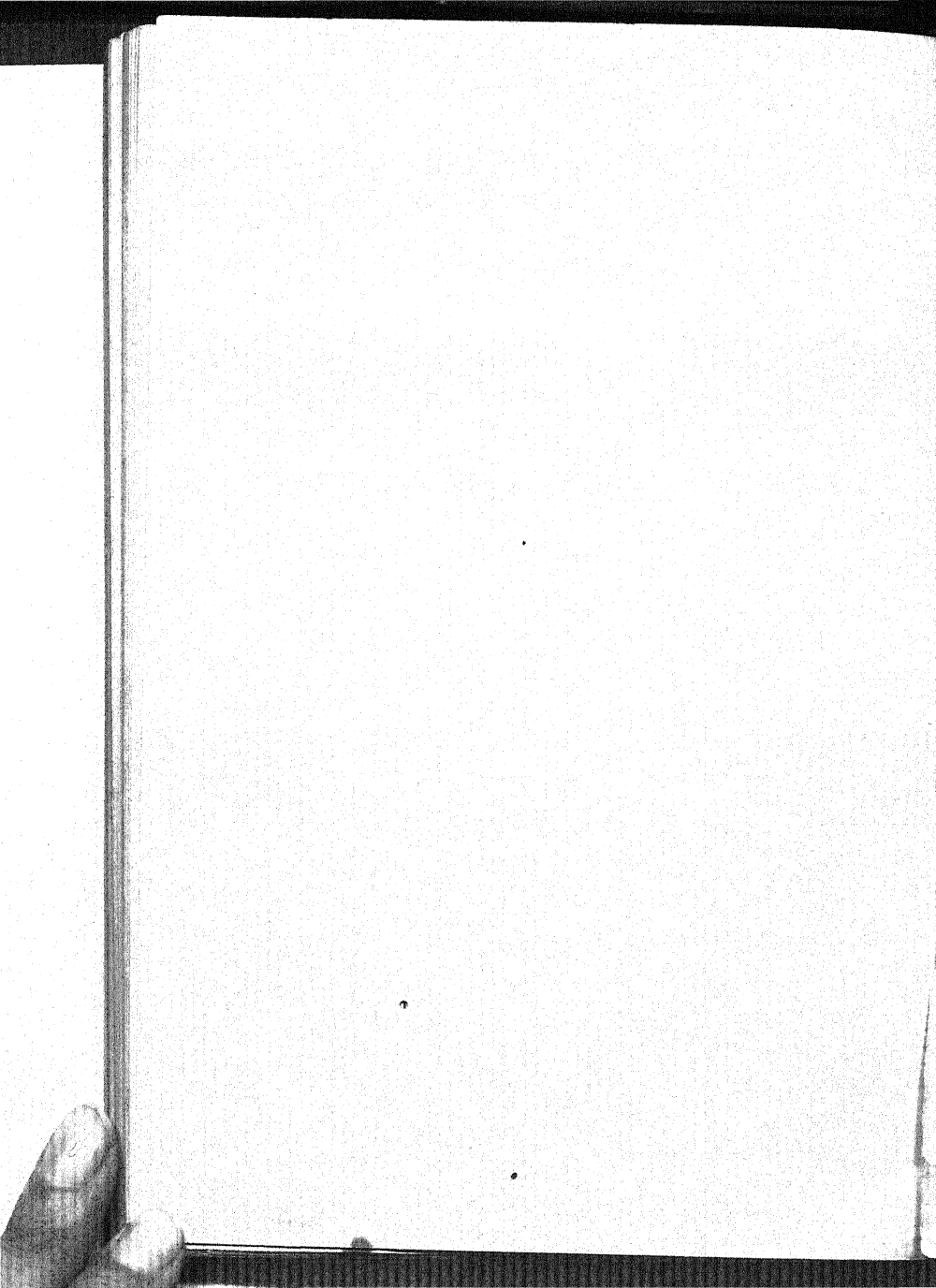
avoid the worst places, where the dray sometimes sank to its axles, by striking across country, and in so doing frequently lost touch with the river altogether. This was a serious loss of valuable time, and at length Sturt decided to put together the boat and trust to the stream to bear him and his companions westward—whither he did not know. Accordingly, a few miles beyond the junction of the Lachlan and Murrumbidgee, a halt was ordered, and the boat was made ready for her voyage. But it was found that she was not big enough to carry all the provisions and equipment, together with the seven men whom Sturt intended taking with him. There was nothing for it but to build another boat. A tree was felled, and at the end of three days a small one had been constructed. Those who were left behind were ordered to form a depot higher up the river and there await the return of Sturt and his companions. Aided by a swiftly flowing current and a fair wind the boats made rapid progress. True, there were difficulties and dangers, but our travellers made light of them. The natives, on the whole, were friendly, and except for occasional collisions with fallen tree trunks lying in the stream, wholly or partially submerged, their voyage during the first few days was uneventful. On 13th January they entered a much wider and deeper river (the Murray), the same stream that Hume had crossed some miles to the east five years previously. When at night they pitched their tents on the high banks of this river the natives thronged around them in hundreds, looking with eyes of wonder upon these pale-faced visitors and their belongings. So far, however, the inhabitants were friendly towards



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KING WATCHING THE LAST MOMENTS OF BURKE

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them. With one chief they became on very amicable terms, and it was most fortunate that they did so, for had it not been for the timely intervention of this native not one of them would ever have seen Sydney again. It came about in this way. One day, a week after entering the Murray, they were alarmed to see on the banks a crowd of some 600 natives, who, by their waving spears and frantic gestures, evidently intended to attack them. The situation was the most critical that Sturt had hitherto been in. That mischief was intended there could be no doubt. Ordering his men, who behaved throughout with the most commendable coolness, to have their arms in readiness, he himself took his station in the prow of the boat, gun in hand, hoping against hope that there would be no need to use it. Then the situation grew even more serious. The river suddenly became shallower, and some distance ahead a sandbank was seen stretching three parts of the way across the river. The natives ran and took their stand upon it. Slowly the boat drifted nearer, and Sturt levelled his gun, covering the foremost savage. Had that shot been fired the Murray Expedition would never have returned, for brave and reckless as its members were they must have been overwhelmed by the vastly superior numbers. Help was at hand, however. Hearing a shout from one of his companions, Sturt turned his head and saw four natives running with all speed along the left bank towards them. The leader dashed down the bank, plunged into the stream, and with a few powerful strokes gained the shoal. He pushed back the foremost savage roughly, and indicated by shout and gesture that no

harm was to be done to the travellers. This native, who had arrived just in time, turned out to be their black friend mentioned above, and so great was his authority that the boats were suffered to float by unmolested. Having safely passed the danger spot, Sturt saw that the Murray was joined on the left bank by a large river from the north. Feeling that no danger need now be feared, he landed on the western bank of this tributary, and in a little while those same natives, who only an hour before had looked the most desperate of foes, were peaceable and curious observers of the white men's preparations for pitching their tent! Before leaving their camp on the Darling—for such was this noble tributary—they bestowed several presents upon their black deliverer.

For about 300 miles beyond this they followed the windings of the Murray westward. Then it turned sharply to the south, and its gradually increasing breadth and lengthening reaches led them to believe that they must be nearing the sea. They were right. Steep cliffs rose on either bank, gulls flew over their heads, while strong south-westerly winds made the rowing much harder. At last, nearly a month after entering the Murray, their boats sailed out upon a broad but shallow expanse of water—lake Alexandrina. This lake, they discovered, was connected with the sea by a narrow passage, through which they could not sail owing to the shallowness of the water. The question now was: how should they return? Even if they could find a way out to the sea, it would be madness to expose their frail craft to the waves and winds of the outer ocean; while

a journey over the mountains to St. Vincent Gulf, where they might possibly find a boat to take them back to Sydney, did not commend itself to any of them. Accordingly they decided to return by river.

Try to imagine what this decision meant for them. Their stock of provisions was very small, they were already weakened in health by the exposures and hardships of the downward journey, and yet they boldly decided on this course. The current, too, was against them, making the work at the oars trebly hard. It is impossible to deal with their return journey in detail. The story is one of dogged determination and of exhausting labours under the worst conditions. Every man, including the gallant Sturt himself, took his turn at the oars. The heat was oppressive, and as the days of toil succeeded each other with pitiless monotony the strain began to tell upon even the most robust of the party. But they made headway slowly and regained the Murrumbidgee without encountering any hostilities from the natives. They were in a pitiable condition, however. Pains racked their joints at night; and when they tried to walk, their legs, scarce able to support their bodies, moved with awkward jerks. On 11th April the boat was abandoned and camp was pitched. Eighty miles from that spot, across country, was a station. Who would offer to tramp those weary miles for succour? Immediately two of Sturt's men volunteered. They started, and probably not one of those left behind dared hope that the two brave fellows would ever complete the journey. On the eighth day they returned, and not a day too soon; for on that very morning the last ounce

of flour had been served out to their anxious companions in camp. Sturt had solved the mystery of the Murray and its mighty tributaries.

We must now pass over a period of fifteen years, which brings us to the year 1844, when Sturt was once again selected as the leader of an expedition, the object of which was to explore the central area of South Australia, and, if possible, to traverse the whole continent from the south to the shores of the Indian Ocean on the north. The exploring party, consisting of sixteen members, left Adelaide on 24th September, 1844. They took with them thirty bullocks, a flock of sheep, several horses, and some dogs. Four big drays carried their outfit, together with provisions for eighteen months. On this journey Sturt had with him, as draughtsman, McDonall Stuart, famous as the first explorer to cross the continent from south to north. The expedition proceeded by way of the Murray and Darling to a point called Laidley Ponds, where the latter river makes a bend to the north-east. From Laidley Ponds a north-western direction was struck towards the Barrier Range. From these hills Sturt thought a river might flow to the west or north-west. If so, such a stream would afford them a good passage either into the interior or, better still, to the Indian Ocean. But he was disappointed. No such river existed. Instead, as they advanced, the character of the country became worse. Deep ravines, hills studded with rugged masses of granite glaring in the fierce sun of the southern summer, and scarcity of water rendered their progress slow and painful. On 27th January, 1845, they reached a fairly large "hole" of

water in a rocky basin, and here a "depot" was formed. To go on was out of the question. Around them were miles upon miles of desert, with no blade of grass showing, and every creek dried up by the scorching heat. Where they were was water, and while that lasted they were comparatively safe. The heat, however, was intense. The earth, sun-baked and scored with huge cracks, split the horses' hoofs, while the stirrup-irons blistered the hands of the rider who chanced to touch them when mounting. Then illness came. Scurvy attacked the leaders of the expedition, and Poole, the scientist of the party, died. Indeed the leaders of the expedition were the first to be struck down by disease; for, in spite of the fact that they were surrounded by many miles of barren, scorching desert, these men were constantly making short excursions from the depot to the north-west and east in the hope of finding a more abundant supply of grass and water. These journeys meant, to those who undertook them, great privations and hardships, and it is not to be wondered at that those who had thus become the weakest physically were the first to fall victims to disease. But a true leader is always willing to expose himself to any dangers, to take any risks, for the safety of his subordinates; and in this respect the chief men of this South Australian expedition proved that they were well worthy of the name of leaders. The gallant Poole died and was buried; and the others waited—hoping, longing, praying for rain. At last it came. On 12th July rain fell, the first for four months, and within a week, cheered by the welcome change, Sturt and his men were pushing on again to the

north-west. In a few days they reached Fort Grey, 61 miles from the former depot, and here it was decided that the main body should remain, while Sturt, with four others, should go on as far as was possible into the interior.

The four started, taking with them provisions for fifteen weeks. The record of the journey is one long story of hardships and disappointments. They had to cross hills and ridges of red, glaring sand. For days they journeyed over a desolate plain strewn with huge boulders—the Stony Desert of the map. This was succeeded by a wide stretch of iron-hard earth. And here the going was most difficult; for the soil, owing to the fierce heat of the sun, was marked with wide and deep cracks—a constant source of disaster to their exhausted horses. Frequently they struck the course of a creek. At such places they sometimes found grass, sometimes grass and water; but often they found neither—the last blade of grass burnt brown, the last tiny trickle of water dried up by the sun. By 4th September they had got as far to the north-west as Eyre Creek. Grass and water were found here, and after a short rest they pushed on again. As they proceeded the country became more sterile, and they soon found themselves in one of the most desolate regions in the world. “Did ever man see such country!” exclaimed one of Sturt’s companions, and there was good reason for his outburst. Away to the north stretched a wave-like series of low hills, of glaring red sand. Stunted shrivelled thorn bushes were the only sign of vegetation. There was neither grass for their horses nor water for themselves.

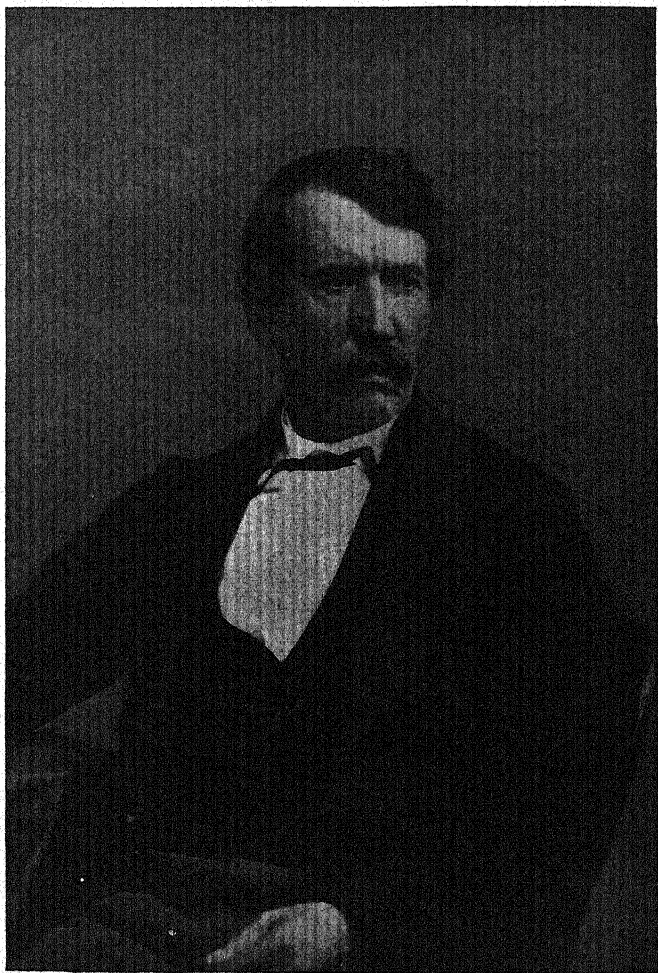
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In the face of these conditions it was useless to think of going on, and on 8th September Sturt and his three companions began the return journey over the 400 miles lying between them and Fort Grey. Even when this depot was safely reached Sturt did not immediately start for Adelaide, but made one more attempt to gain the centre of the continent. This time he took a more northerly direction, until he reached the banks of a wide stream of water. To this river of the interior he gave the name of Cooper Creek; then, striking to the northwest, he once more attempted to force a way across hills of sand and rock-strewn plains. But the journey had to be abandoned. Day by day the horses were growing weaker, while the sufferings of the men, aggravated by short rations, great heat, and the dazzling glare of the fiery sand, left no other course open to Sturt. He reached his home in Adelaide on 19th January. From the cruel ordeal of those months of travel and exposure he had not come out unscathed. (Half-blinded, and physically weakened by disease and privations, it was a long time before he recovered from the effects of the expedition. He had tried and he had failed. But against such odds his failure was as glorious as many another man's success.

We now come to one of the most tragic stories in the history of Australian exploration. In the year 1860 subscriptions were raised in Victoria for an expedition into the interior. Money came in readily, and the expedition, as far as men and equipments were concerned, left nothing to be desired. On this expedition camels were used—the first time these animals had been em-

ployed by the explorer in Australia. The leading men were Burke and Wills, the latter being responsible for the scientific investigations to be made during the journey. The expedition left Melbourne on 20th August 1860, and by the end of the month Menindie was reached, where the first depot was formed. At Menindie the party divided. Burke, Wills, and six others, with half the horses and camels, went on ahead towards Cooper Creek, leaving the rest behind. If he found that the country afforded sufficient water and pasturage, Burke promised that he would send back word to those at Menindie to proceed northward to Cooper Creek. Burke discovered that both water and grass were plentiful, and accordingly he sent back one member of his party, Mr. Wright, with instructions to bring the main body to Cooper Creek with all speed. Meanwhile Burke arrived at Cooper Creek, where he pitched camp and waited anxiously for the arrival of the others. The days dragged slowly by. Every morning Burke and his companions looked eagerly for their friends, who, ere now, should have joined them. But it seems that Wright, on getting back to Menindie, had heard from some source or other that Stuart, the draughtsman of Sturt's last expedition, had nearly succeeded in crossing the continent. This was important news for Burke, who might be inclined to bear farther to the west, nearer to Stuart's course, and so increase his chance of success. So Wright sent messengers post haste after Burke to acquaint him of the news. But they did not return, nor did they overtake Burke. A search party was sent out from Menindie to seek for these. And





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DR. LIVINGSTONE

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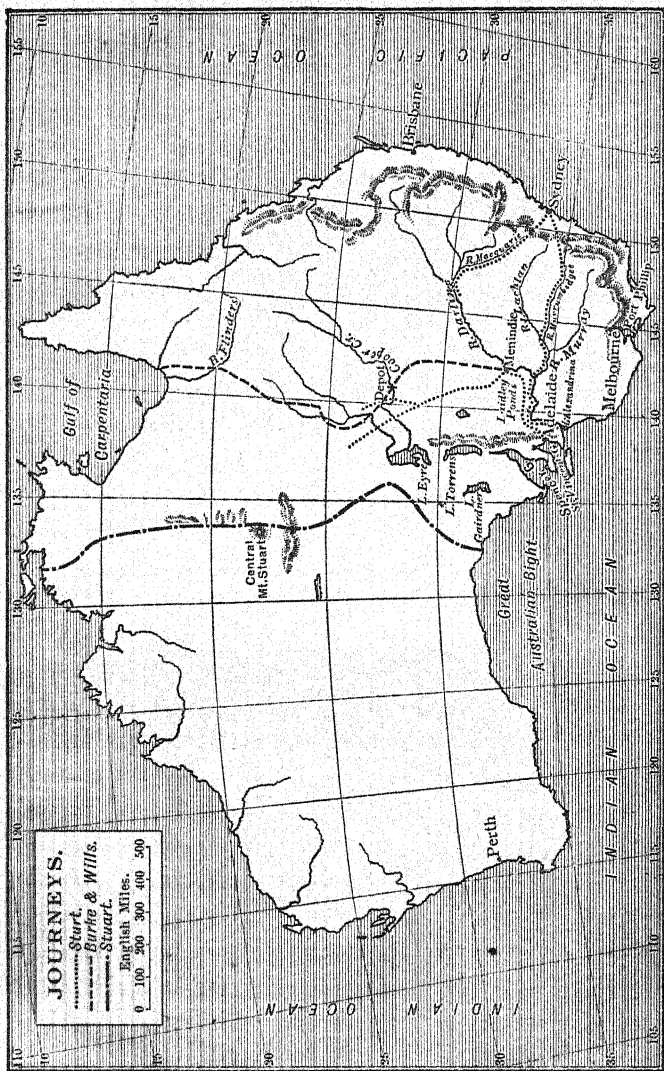
still Wright waited, losing precious days, until the search party returned with news neither of the messengers nor of Burke. When at last the main body went on to Cooper Creek, they were too late. But let us go back to Burke, whom we left impatiently waiting for the appearance of Wright.

On 16th December he decided to wait no longer. Four men with six camels and twelve horses were left at the depot, where there was an abundance of grass and water, to await the arrival of the main body. Burke, with Wills and two others, started northward, their aim to reach the shores of the Gulf of Carpentaria. They took with them six camels, one horse, and provisions for three months. The last words of Burke as he bade farewell to the remaining four are characteristic of the man: "If I am not back in three months, consider that I am dead". And so these four men, brave, fearless, and determined, set their faces to the north: behind them, home, friends, and comforts; before them, many miles of an unknown continent.

For some distance they followed the banks of Cooper Creek, then, striking westward, they crossed the eastern section of the Stony Desert. North of this desolate region grass and water were found, and with hopeful hearts they made a direct line for the gulf, following, for a distance of some 300 miles the 140th meridian of longitude. It was no barren desert over which their route lay. They crossed fertile and well-watered plains, plunged through forests of boxwood, skirted fair-sized rivers, and gradually held on their way till they found themselves amongst the tropical vegetation of the north-

ern regions. Soon after crossing the Flinders River two of the men were left behind with the camels, as they were beginning to show signs of exhaustion, and Burke and Wills pushed on alone on foot; and on 11th February, 1861, they were rewarded by the sight of the sea. They had reached the Gulf of Carpentaria, having crossed the continent from south to north.

On 21st April, four months after they had set out from the depot, three men, wearied, footsore, and on the verge of starvation, staggered into the enclosure of what had been their camp on Cooper Creek. The three men were Burke, Wills, and King. Gray, the fourth member of the party, had died a few days before. They were leading two camels, each in a pitiable condition. They entered the enclosure, and as they looked around, the truth, with all its terrible significance, slowly dawned upon them. The place was deserted! All that stood between them and death by starving was the one small chunk of dried meat—the last remnant of their provisions. Then they examined the deserted camp more carefully. Fresh marks, signs of a recent departure, were visible on the ground. On the trunk of a tree they saw the word "Dig". For a brief space despair gave way to hope, and with aching limbs they turned back the soil at the foot of the tree. There they discovered provisions—flour, rice, oatmeal, sugar, and meat—enough to last them for some days at any rate. But this was not all. (Within a bottle they found a roll of paper, the intelligence on which confirmed their suspicions of a recent departure.) The four men who had been left behind at Cooper Creek had started for the



Darling that very morning! A few hours earlier and they would have been in time!

To attempt to overtake the others in their condition was out of the question. Burke wrote an account of his doings and placed it in the hiding place, carefully covering it with earth after so doing. But he did not alter the word "dig" upon the tree; and consequently, when the others returned to Cooper Creek from the Darling, three weeks later, they thought that the unfortunate Burke and his companions had not succeeded in getting back to the camp.

There is no need to go into too many details of the wanderings of the luckless trio, Burke, Wills, and King. After resting at the abandoned depot for five days, they decided to try to reach Mount Hopeless, near which there was a settlement. With this end in view they set out westward, following the windings of Cooper's Creek. By taking this course they would always have a supply of water at hand, or so they thought. Even in this, however, they were doomed to disappointment, for after some miles the creek was lost in marshy thickets. So they turned once again to the east, hoping to meet with natives from whom they might procure food. Nardoo, the seed of a clover-like plant, used by the aborigines for making flour, was given them by one party of natives, but they found the stuff very unpalatable, and what they did manage to eat failed to nourish them.

Every day their plight was growing more hopeless. Their own provisions were gone. Hunger, thirst, sickness, exhaustion—against all these they fought bravely, but hopelessly, staggering on day by day, aimlessly now

as regards direction, their one need food. On one occasion Wills, who had gone on alone, came to a camp. The natives were friendly and gave him fish and cakes of nardoo. He returned, almost joyfully, to his friends, and the three, by slow and painful degrees, managed to drag themselves to this camp, which promised plenty. They got there only to find it deserted. But nardoo grew around, and for a few days they rested in a deserted native hut, King, owing to the weakness of Burke and Wills, having to collect the seeds and grind them for all three. Then King determined to make one more attempt to reach a native encampment. Wills, however, had to be left in the hut. Having collected a quantity of nardoo for their helpless friend, and taking a supply for their own needs, King and Burke set out.

As they proceeded, King saw that his companion could not possibly go far. He tottered as he walked, and his face was drawn with the pain which tortured his body at every step. His bag of food, small as it was, was too heavy a load for him, and he threw it away. Then they came to a deserted camp, where they slept that night. The next morning Burke was much weaker, and a few hours later he died. King was now alone. He fought his way on, and two days afterwards came across some natives. They gave him food, more than enough for his own wants, and he hurried back, as fast as his wearied limbs could carry him, to the spot where he had left Wills. But he was too late. Wills was dead.

Meanwhile, the news of the disappearance of Burke and his companions spread quickly. Relief parties were

sent out with all speed in every direction, and by one of these the sole survivor, King, was found. He was in the last stage of exhaustion, and speech had almost gone from him. Later the bodies of Burke and Wills were found. They were taken to Melbourne, where a public funeral was held in honour of these brave men who had given their lives in the cause of Australian exploration.

Livingstone and Stanley

It is mid-day on 10th November, 1871, the country Central Africa. The sun pours down its fierce rays on a party of men consisting of one white man, a number of native soldiers, and a crowd of baggage carriers. From where they stand, on the summit of a gently sloping mountain whose sides are covered with rich vegetation, the waters of a mighty lake can be seen glittering in the sunshine. On the edge of this lake, lazily dreaming in the noontide heat, lies a native village. Soon a movement is noticed among the huts. Crowds of people are rushing towards the spot where the newcomers have taken their stand. The white man marshals his followers and starts on the last stage of the journey which to him means so much. In a few minutes he will know whether he has toiled in vain, or whether glorious success awaits him.

As he nears the village a small group of Arabs approach. Amongst them is seen a white-haired, bent old man, evidently a European. The newcomer hastens forward, and raising his pith helmet, says in an enquiring tone:

"Dr. Livingstone, I presume?"

The old man, in return, raises his cap, smiles, and says briefly:

"Yes."

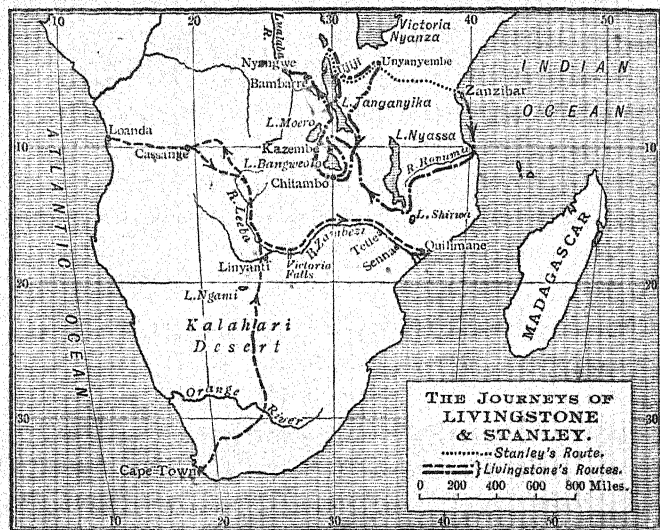
Such was the meeting of Dr. Livingstone, the greatest explorer of modern times, and Mr. H. M. Stanley, the intrepid traveller who had been sent by a New York newspaper to search for him.

Livingstone's first appearance in Africa was in 1840 as a missionary, and for over ten years he was engaged in that work. In addition to his labours as missionary he found time for exploration and made a number of discoveries, among the chief being Lake Ngami in 1849, and the River Zambesi in 1851.

His fame, however, as an explorer rests chiefly upon his great journey across the continent from west to east, and upon his explorations in the district of great lakes to the north of the Zambesi. It is with these journeys that the following pages deal.

In June, 1852, Livingstone left Cape Town. His purpose was to get from the south coast to Loanda, the capital of Angola, and then to march right across the centre of Africa to Quilimane on the east coast. His outfit was wretchedly inadequate, for he had little funds. He finally started with ten poor oxen and a wagon which needed constant mending. Progress was very slow, and the Boers whom he met were most unfriendly, so that it was not until the end of the year that he came to the Kalahari Desert. On one of his previous journeys he had found that this was not the arid waste most people thought it to be, and it was crossed without much

difficulty. The country, for miles round, was covered with tall coarse grass, interspersed with creeping plants and clumps of trees and bushes. It was the home of swarms of wild animals and tribes of Bushmen. Of these people Livingstone says in his journal that they



were "always merry and laughing", and, unlike the Bechuanas, were honest and truthful.

In May, 1853, he arrived at Linyanti, and here he was among friendly natives, whose chief, Sekeletu, was extremely fond of Livingstone. From this town a number of hunting expeditions were made, and during these Livingstone sought to ascertain the possibility of establishing settlements. But the country was most unhealthy and unsuitable for settlers.

Livingstone was naturally anxious to proceed on his way; but as a doctor he was in such demand by the people that Sekeletu did his utmost to delay him. It was not until November that Linyanti was left behind.

The expedition began its march up the Rivers Leeambye and Leeba, and above these rivers the vegetation of Central Africa was seen in its greatest profusion.

One bird was particularly noticed, called by the natives, from its harsh metallic cry, "hammering wire". This little creature is a great friend to the crocodile. The latter is much annoyed by numerous water insects which attach themselves to the roof of its mouth, and this bird fearlessly enters its open jaws and makes a meal of the intruders. Another interesting bird was the snake-bird.

This is a fine swimmer and travels through the water with only its head and neck visible above the surface.

The country also swarmed with elephants, rhinoceroses, antelopes, zebras, and other animals, and Livingstone often took part in hunting expeditions in order to supplement his food supplies. While crossing this hunter's paradise, Livingstone, for the first time, met female chiefs, two of whom he visited. One of them was a magnificently built woman, with a mind equal in strength to her body, for she was one of the very few who had their own way with Livingstone, calling him "her little man". When on the march with her followers she always went ahead, and frequently found herself compelled to stop, owing to the inability of her attendants to keep pace with her. The expedition was now in the country of the Chibouques, a tribe which was in touch with the

slave dealers who infested this part of Africa. But the Arabs, knowing of Livingstone's determination to put an end to this ghastly trade if possible, incited the Chibiques to plunder his party.

So the chiefs, intent on plunder, came to the camp with unreasonable demands for gifts, but found the leader ready. Sitting on a stool in front of his tent, with his gun across his knees, he listened patiently to their words. But his cool courage daunted them, and the meeting ended with Livingstone giving them an ox for food, in return for which they gave him goods which were afterwards found to be practically valueless. He at last reached Cassange, the most easterly Portuguese settlement, where he was treated with the greatest hospitality. At this place Livingstone sold the ivory he had obtained, receiving in exchange supplies of calico and beads, as well as a few muskets and several barrels of powder. Here, also, he was much struck by the goodwill existing between the natives and the Portuguese, and tells us in his diary that nowhere else had he seen such friendly relations between settler and native.

Having been furnished with guides, Livingstone started for Loanda, and reached the coast on 31st May, 1854, in a very enfeebled state of health, for he had had over twenty attacks of fever since the journey began. He was reduced almost to a skeleton, but under the care of the European doctor quickly recovered his strength. On 20th September he began the return journey to Linyanti, making a detour in order to avoid the country of the Chibiques.

The district around Loanda was amazingly fertile,

and Livingstone saw with astonishment tobacco plants 8 feet high, having huge leaves, some of them 18 inches long. A change of diet was obtainable also, for flocks of birds resembling turkeys were seen everywhere, and many were killed by the traveller. These birds are the sworn enemies of snakes, which they kill by cleverly striking them behind the head with their hard beaks. Many different kinds of flowers were also seen, and the river banks were covered with rich vegetation. Indeed, one small flower grew in such profusion as almost to form a carpet of many colours, for the hues varied from all shades of yellow to the loveliest shade of purple. The only thing which marred the beauty of the country was the frequent sight of ruined and deserted villages, telling of the raids of cruel slave traders. The party now came to the Leeba. To cross it canoes were bought from the natives. These were made of thin and light material, capable of holding only two people, and were as sharp pointed as racing skiffs. This was necessary, for they were used for hunting animals in the water, and great quickness was required to evade the rush of a wounded hippopotamus. Each boat was bought for a string of beads as long as itself.

At last, on 11th September, 1855, Linyanti was reached, Livingstone prostrate with his twenty-seventh attack of fever. Only a short time was spent there, and the start for the east coast began on 3rd November. Sekeletu and his chief men accompanied them for some days along the banks of the Zambesi until they came to Sesheke. Soon several columns of vapour were seen in the air at a distance of 5 or 6 miles—the tops seeming to mingle

with the clouds. They had arrived at what are now known as the Victoria Falls, but which were then called by a native name meaning "Smoke does sound there". To the fitness of this name every traveller who has seen these vast falls can testify.

The scenery around was extremely beautiful. The banks, and the islands dotted over the river, were clothed with all kinds of tropical growth, while many of the trees were covered with blossom. Livingstone, the first European to visit the falls, was amazed by their grandeur. With some difficulty he persuaded several of his men to take him as near as they dared, and the full splendour of the scene burst upon him. These mighty falls are more than a mile broad, the water making a sheer drop of nearly 400 feet. Then this vast mass of water is suddenly compressed into a space from 15 to 20 yards wide, and the roar as it pours down another descent is truly deafening.

Livingstone noticed a very curious custom among the tribes living near the falls. The front upper teeth were knocked out, and this resulted in the under teeth growing long and bent, causing the nether lip to protrude in a very unsightly manner. As the journey continued, a number of objects, shaped like native huts, were seen dotted about. On closer examination they proved to be anthills, some of which were 40 to 50 feet in diameter at the base and 20 feet in height.

Livingstone took part one day in an elephant hunt organized by the natives; but their method of slaying the animal was so disgusting that he never ventured to do so again. A female elephant and its young one were

discovered. Hundreds of spears were hurled at it, and when the animal turned round and charged, the natives fled in all directions. Then more spears were thrown, until the animal's hide looked like a huge pincushion. Finally it staggered and fell, weakened by loss of blood. The elephant was a huge creature, 8 feet 8 inches high, and according to Livingstone's journal its fore foot measured 8 feet in circumference.

Keeping to the banks of the Zambesi, they crossed the Kafue, its largest tributary, and on 14th January, 1856, arrived at the confluence of the Loangwa and the main stream.

Here a most exciting incident took place. A herd of buffaloes suddenly appeared, and a native carrier, thinking no doubt of a good meal, stabbed one with his spear. At once the enraged animal turned, and before the man could reach a tree it was upon him. Picking him up on its horns, the buffalo carried him for about 20 yards, and then tossed him high in the air. The man fell on his face to the ground, and Livingstone, who had run up with his gun, quite expected to find him mortally injured, if not dead. Strange to say, beyond a severe shaking, the man was unhurt.

The country through which they were now passing was exceedingly fertile, but the march was most difficult, for it rained every day, and the lightning, especially during the night-time, was very vivid.

Livingstone one day had the unusual experience of seeing elephants swimming across the river. Three were seen on an island, and thinking they were trapped, the hunters went across. The elephants, however, man-

aged to swim ashore, travelling through the water quickly with their trunks erect in the air.

The people of this part of Africa, known as Banyai, have a most peculiar way of dressing the hair. They draw or plait it into small cords about 1 foot long. Round each cord the inner bark of a tree is entwined, and this substance is then dyed red. When their hair has been thus dressed, the natives appear very like ancient Egyptians as they are represented in old engravings. This mass of hair reaches to the shoulders, but when travelling the Banyai tie it into a bunch on the top of the head.

On 3rd March, 1856, the expedition reached Tette, a Portuguese settlement. Here Livingstone stayed for about a month, leaving most of his followers behind him when he began his journey down the river to Senna. From Senna he made an easy passage down the Zambesi to Quilimane at its mouth, where he arrived on 20th May, 1856. He set sail for England towards the end of December, and found himself the most-talked-of man in the British Isles.

Livingstone left England in 1858 to explore the mouth of the Zambesi and some of its tributaries with a view to establishing mission stations. While engaged in this work he discovered Lake Shirwa and Lake Nyassa, the latter in September, 1858. In May, 1860, he determined to pay a long-deferred visit to Linyanti to take back the Makololo men who had travelled with him to the coast four years before. This time three Englishmen accompanied the doctor, and so the journey was much more pleasant than the previous one. The white men

did the hunting for food, and, much to their surprise, easily fatigued their native attendants when on these expeditions. Several elephants were shot, and provided great feasts for the natives. All the animal is not eaten—the titbits are the fore feet, trunk, and the tongue; the rest of the meat, being too tough to be eaten, is thrown away. The native method of cooking the fore foot is rather striking. A large hole is made in the ground and a fire lighted in it. When the “oven” is hot the whole foot is placed inside and covered with ashes and soil. Another fire is then placed above, and kept burning all night. In the morning the foot is taken out cooked, and appears as a whitish mass of the consistency of gelatine, and having rather a sweet taste.

On this journey the Victoria Falls were visited again, and a better idea of their grandeur was obtained, for some days were spent in the vicinity.

At Linyanti Livingstone found the wagon untouched which he had left there in 1853, and was therefore able to get medicine and stores from it. Tette was again reached in November, 1860.

Between this time and 1866, when Livingstone started on his last journey, several short excursions were made. Lake Nyassa, discovered in 1859, was visited and explored more thoroughly. On this expedition the explorer was dismayed to find what terrible devastation the slave dealers had caused among the natives of that part of Africa. All round the shores of the lake was a dense population—indeed in some places there was an almost unbroken succession of villages. (Previous to Livingstone's visit this neighbourhood had been left practically

untouched by the slavers. His example, however, had shown them that the country could be penetrated quite easily, and they were not slow to take advantage of the fact. Several times Livingstone met bands of these men with lines of manacled slaves making their way to the coast, and although opposed to using force, he sacrificed his principles and set the miserable creatures free.

When exploring to the north of Lake Nyassa, Livingstone came upon a most singular "harvest" the natives were accustomed to gather. Clouds like smoke were seen. On approaching, it was found they were formed of millions of minute insects. These were gathered by the natives at night, were then boiled down into thick cakes, and eaten as a relish with their food.

Livingstone finally returned to the mouth of the river and sailed to England, where he spent a short time. In 1866 he was again in Africa, engaged in preparing for his last journey into the interior. His purpose on this expedition was to explore the country round Lake Tanganyika. (The organization and equipment were much better than on his journey to Loanda.) The party consisted of twelve sepoy, obtained from the Governor of Bombay, nine men from the Comoro Islands, seven liberated slaves, and two Zambesi men. There were also six camels, three buffaloes, two mules, and three donkeys. These last were a source of great amazement to the natives, especially when braying. Livingstone also carried with him bags of coloured beads and bales of calico for trade and barter.

He started on March, 1866, in the best of spirits, and with every hope of a successful journey. But misfor-

NANSEN CROSSING GREENLAND



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tunes soon began. After some months of hard struggling the sepoys were sent back to the coast, owing to their laziness and cruelty to the animals. Then the Comoro men deserted, and returned to the mouth of the river with the news that the doctor had been murdered.

But with the rest of the men Livingstone continued his march through thick forests and across streams. Then food gave out, and at one time they were reduced to such straits that they were compelled to eat wild fruits.

From January to August, 1867, was a terrible time for Livingstone. He was in the grip of fever nearly the whole time, and on several occasions was delirious; but with the help of his faithful attendants the critical period was passed. Three months were spent in recruiting his strength, and then once again the march began. Later he fell in with a caravan led by Mohammed Mogharib, an Arab, who offered him escort, which was gratefully accepted. Livingstone had heard of a lake in the neighbourhood, and in November discovered Lake Moero, and explored the district round its shores for some months. In the meanwhile reports had reached him of a great mass of water lying to the south, and he determined to visit it. The Arabs and his native followers did their best to dissuade him, and called him "water mad", but it was of no use. The journey southwards was made, and in July, 1868, Lake Bangweolo was discovered. Livingstone explored the shores of this lake, and travelled nearly all round it, meeting with his Arab friends once more. With these he marched north, and came to the important town of Kazembe. Here he had

an interview with the king and queen, and spent a very pleasant time. Later on, however, this friendly chief was attacked by an army of hostile natives, with whom the Arabs sided. But the inhabitants of Kazembe proved more than a match for them, and drove them off, compelling the Arabs to fly to the north. Livingstone followed them with his few faithful attendants, and at last reached the western shores of Lake Tanganyika. Here fever again seized him, and most of the journey along the banks was done in a litter, for he was too weak to walk.

In the early part of 1869 the lake was crossed in canoes, and on 14th February Ujiji was entered. This town, situated on the eastern shores of the lake, Livingstone determined to make his headquarters. After spending some time there, and having recovered from his illness, he recrossed the lake and came to the town of Bambarre. This journey was made through a most beautiful country. The hills were generally covered with magnificent trees, whose foliage was of every shade of green. (It offered a most pleasing contrast to some of the country previously traversed.) On several occasions a way had to be cut through rank vegetation, where the grasses were $\frac{1}{2}$ inch in diameter and from 10 to 12 feet high.

He stayed at Bambarre for a considerable time, waiting for men and supplies to reach him. These, however, did not arrive, and the weary months of waiting were spent by Livingstone in exploring the country around. Once again he noticed the terrible ravages of the slave dealers, and came upon villages depopulated by these

ruthless Arabs. He came to the conclusion that the slaves were not generally seized to be sold, but to be carriers. The Arabs wanted their loads of ivory taken to the coast, and found that this was the cheapest way.

Livingstone speaks in his journal of a disease which was common in the district—that of “homesickness”. He says that those people captured as slaves seemed to keep up their spirits until a village was reached. When, however, they heard the familiar noises, reminding them so much of their own native country, their fortitude left them, and many drooped and died.

At last the long-looked-for men arrived, and after some little trouble Livingstone started northwards again in January, 1871, and discovered the upper waters of the River Lualaba. On his way he came upon many villages set among lovely hills. Most of the streets in these villages ran east and west, and so, being well exposed to the sun's rays, quickly dried after rainfall. The huts had a kind of veranda in front, on which a fire constantly burned. Round this the whole family gathered when the burning heat of the day gave place to the cool of the evening. The usual domestic animals were running about the streets, and, with women chattering to one another from the doorways, formed quite an English scene in the heart of Africa.

Nyangwe, the most important town of the district, was finally reached, and here the doctor was again delayed by the refusal of the natives to find him boats for crossing the river. This town has a large market, and hundreds of people come from the surrounding district to buy, sell, or gossip, as even African natives will

do. After waiting here nearly four months, Livingstone was delighted to meet Dugumbé, an Arab trader and an old friend. He promised to obtain canoes for the doctor, but was unsuccessful. The Arab traders already in the town, however, had been able to get some for themselves, and it was evident that the minds of the natives had been turned against Livingstone.

The Arabs, impressed by what Livingstone had told them, promised not to use any force when dealing with the chiefs unless they were first attacked. But a terrible occurrence took place in July.

One market day Nyangwe was crowded with hundreds of people all haggling, laughing, and enjoying themselves generally. Suddenly shots were heard at one end of the town. The Arabs were firing on the crowded masses. Immediately there was a panic. No attempt at resistance was offered, for practically all the men were unarmed. A rush was made for the river, but in the confusion canoes were overturned, and even when some were launched the paddles were left behind. Scores dashed into the water and attempted to swim to the island in the middle of the river. But there was a strong current flowing, and the black heads bobbing about in the water became fewer and fewer. More than 400 people were killed, although many were saved by Dugumbé, who, to do him justice, had no share in this horrible affair.

This tragedy seemed to break down Livingstone's spirits, and he set out immediately for Ujiji. It was a terrible march. The road was in a dreadful condition, in many places being thigh-deep in mud, churned up by the tramp of elephants. At last Ujiji was reached, and

there the meeting of the old explorer and Stanley, as related at the beginning of this narrative, took place in November, 1871.

Stanley had brought a number of letters and much news for Livingstone; so several days were spent by him in reading them and in listening to Stanley's account of his march. The latter had left Zanzibar accompanied by two white men and forty-eight native soldiers and baggage carriers. He struck across a practically unknown country, where progress was exceedingly slow, 7 miles a day being a very good journey. The two white men proved useless to Stanley, and the whole care of the expedition fell on his shoulders. He was at once doctor, general, storekeeper, and overseer. The party travelled in compact order, like soldiers on the march, and it was only after 114 days of weary toil that they arrived at Unyanwezi or Kwi-hara. Here various accounts of Livingstone reached him, and he heard from several sources that the doctor was alive a few months previous to this. The natives spoke of an old man who had passed that way. He was dressed in clothes like those of Stanley, and wore a gold-laced naval cap—a well-known feature of the doctor's apparel. Whilst recruiting here the days were passed in a very quiet manner. At six o'clock Stanley took his morning cup of tea. Then until ten o'clock he was busy paying calls or making arrangements for the day. At ten o'clock breakfast, consisting of rice and oatmeal, was taken, an ox-hide on the ground being used as a seat. The forenoon was passed in helping the soldiers prepare for the coming march, and at seven o'clock dinner was served

by the black cook. About nine o'clock the whole party generally retired to rest.

After some little delay, owing to trouble with a hostile king, Kwi-hara was left on 23rd September, the way being towards the eastern shore of Lake Tanganyika. The country through which the expedition passed was exceedingly fertile, and the natives were well disposed towards the party. The traveller fell in with a friendly chief, and presents were exchanged. He visited Stanley in his camp, and was given a glass of brandy, with which he was delighted. His pleasure was increased when he was allowed to smell a bottle of strong ammonia. The chief went back to his men with eyes swimming in tears, but declaring that Stanley was a wonderful man. Game abounded everywhere, and the time passed pleasantly.

On their way the party came to a very broad river which could only be crossed by a bridge of interwoven plants. When everyone was on this bridge the floor sank nearly 2 feet below the water. There were also holes in many places, and one of the donkeys having fallen partly through, the services of ten men were required before it could be raised. Soon after this obstacle had been overcome a caravan was met coming from Ujiji, and from the Arabs they learned that a white man was living at the town when they left five days before. Stanley was delighted, feeling sure that this was Livingstone.

On 10th November they came within sight of Ujiji, lying on the shores of the lake, and preparations were made for entering the town. The native soldiers were formed in line, with their uniforms and arms in good

order. Stanley himself had his helmet chalked, put on a new pugaree, white flannels and boots, and certainly looked unlike a man who for months had been forcing his way through an unknown tropical country.

Livingstone was then met, and the only bottle of champagne which Stanley possessed was opened to celebrate the occasion.

Towards the end of November the two explorers set out to visit the northern shores of Lake Tanganyika. This journey was looked upon as a pleasure excursion, and the party was a very merry one. They visited several friendly tribes. One of these provided the native attendants with so much liquor that even Susi, the doctor's personal servant, took too much of it. During the night Livingstone felt someone lie down by his side. Thinking it was Stanley, he made room for him, even putting his blanket over the newcomer. In the morning he found, to his amazement, that it was Susi. It was only after several hard slaps that the man was aroused, feeling very ashamed at being thus seen by "the little master", as Stanley was called. The doctor himself was known as "the big master".

On their return to Ujiji, Stanley did his utmost to persuade Livingstone to return to the coast with him, but the old explorer was determined to finish his work. He finally consented to go with the younger man to Unyanyembe, there to await an escort which Stanley promised to send him from the coast.

Christmas, 1871, was spent together at Ujiji, and we are told in the doctor's journal that the dinner prepared to celebrate the day was a sorry failure. Ferajji, the

native cook, managed to burn all the eatables. As he was afterwards seen, however, very much enjoying the burnt custard, cakes, and sweets, there was a lurking doubt in Livingstone's mind that the catastrophe had not been unexpected.

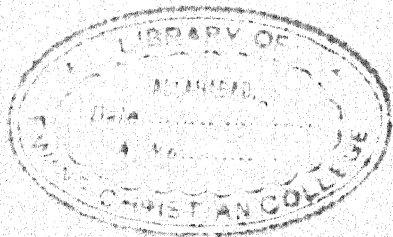
The party at last started for Unyanyembe, the doctor insisting upon Stanley acting as guide. On 18th February the travellers were making their way through a belt of underwood. Livingstone, who was bringing up the rear on his donkey, saw the vanguard suddenly take to their heels and fly in all directions. He wondered at this, but soon discovered the reason, for his donkey threw up his hind legs and then bolted. The travellers had disturbed a hive of bees, and were all badly stung before an escape could be made.

Their destination was reached at last, and on 14th March Stanley departed for the coast, (after one more effort to break down the doctor's resolution.) Goodbyes were exchanged, and the younger man never forgot the sight of the grey-headed old explorer standing at the gateway of the village, waving farewell to the last white man he was ever to see.

Livingstone spent several weary months waiting for the promised escort, which arrived nearly a month late. It was not until 25th August that the start was made with fifty-six men. This last march of Livingstone was a truly terrible one. Until the early part of 1873 the expedition travelled down the eastern side of Lake Tanganyika. It was a very rainy season, and when the neighbourhood of Lake Bangweolo was reached the country was like a huge swamp. Livingstone himself

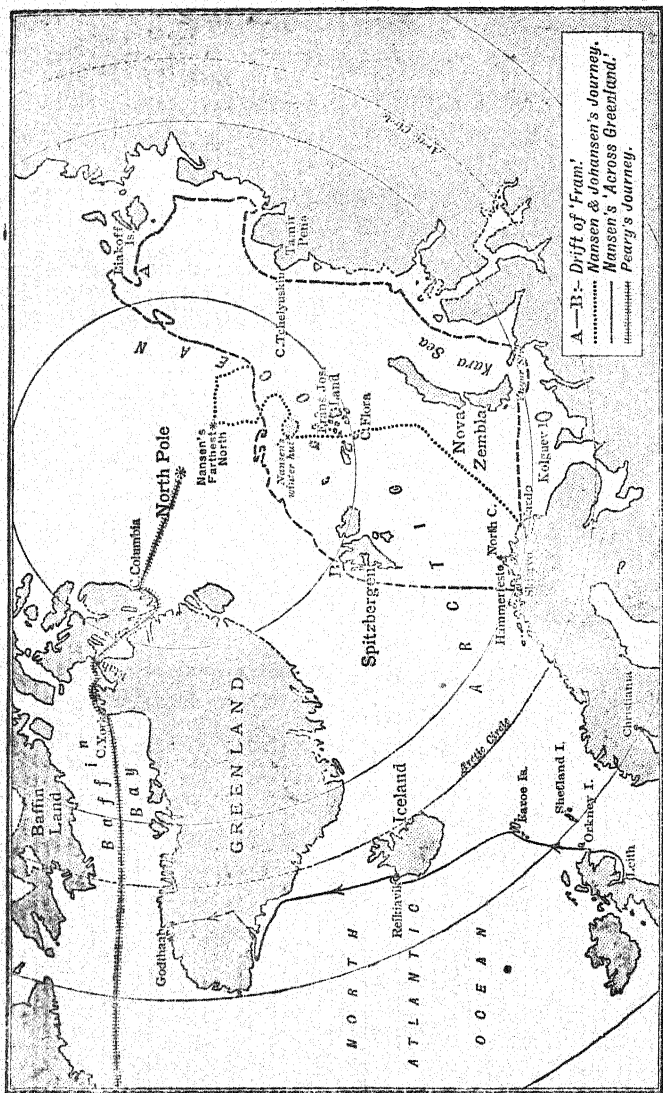
was very ill with an acute attack of dysentery, and for many days had to be carried by Susi and the other servants. When a river blocked their way the doctor was conveyed across on the backs of his men.

In February, 1873, to add to the other worries of the explorer, food supplies ran short. One day he was attacked by swarms of large red driver ants. He suffered as long as he could, hoping they would depart if unprovoked. When their bites began to draw blood, however, he could endure no more and was forced to rush from the tent. On the heroic traveller struggled, though very ill and weak from loss of blood. He made an attempt to ride his donkey, but was unable to sit upright, and fell off. At last, on 29th April, the party arrived at Chitambo, the village of a friendly chief, in the country of Ilala, to the south of Bangweolo. And at Chitambo the end came. During the night of 30th April the dying man spoke several times to his servants. When they entered his tent on the morning of 1st May, 1873, Livingstone was found kneeling by the side of his bed—dead. His work was done, but his fame is ever alive in the memories of men, who realize the good he did in opening up Central Africa and making known the devastation caused there by Arab slave-dealers.



Across Greenland

More than 300 years ago the first Arctic expedition of which we have any authentic record set out for the discovery of the North Pole. (But the Earth guards her secrets jealously, and for three centuries, in spite of costly equipments and heroic exertions of the most daring explorers, no one succeeded in reaching the Pole. At the close of the eighteenth century Parliament offered a reward of £5000 to the traveller who should get beyond the 89th parallel of latitude; but the prize was not won. Attempt after attempt only resulted in failure. The struggle between man and Nature in her sternest mood was most severe. But at length man's courage, perseverance, and determination conquered. In 1909, the newspapers announced to the world that an American explorer, Commander Peary, had reached the coveted goal. Leaving New York in July, 1908, he had sailed in his ship, the *Roosevelt*, to the north-west shores of Greenland, by way of Davis Strait, Baffin Bay, and Smith Sound. x Cape Sheridan was reached in September, and the winter was occupied in preparations and in transferring supplies from the ship to Cape Columbia, the point from which he intended to start on his sledge journey to the Pole. The camp at Cape Columbia was left on 1st March, 1909, and five weeks later, on 6th April, after a journey of few mishaps, Commander Peary (realized the ambition) of a lifetime. x He had reached the North Pole. That spot on the earth's surface where it is always midday in summer and midnight in winter,



and from which all paths lead southwards, had at last been trodden by the foot of man.

In the following pages we intend dealing with the journeyings of a Norwegian explorer, who, sixteen years before Peary's successful expedition, had pushed his way into the frozen regions of the north to the latitude of $86^{\circ} 17'$, a point farther north than any traveller had reached before.

Fridtjof Nansen was born near Christiania in 1861. At the age of twenty-one, on leaving the University of Christiania, he made a voyage in a sailing vessel to Spitzbergen and the Greenland Seas. This was his first experience of Arctic conditions, and it is probable that he was then fired with the idea of solving for himself some of the mysteries enshrouded in those ice-bound silent wastes within the Polar regions.

Six years later we find him making preparations for a journey across the southern portion of Greenland. It was no mean task which he had set himself. The interior of this island is covered to a great depth with ice, the surface of which presents to the eye a vast monotony of whiteness. Steep, rocky cliffs and treacherous ice-fields line the eastern coast and make it almost inaccessible. The west coast is rather less inhospitable, having tiny settlements here and there. For this reason Nansen determined to cross the island from east to west. Civilization, such as it was, would then lie before him. There could be no turning back. Either he would succeed or perish before reaching the western coast.

The party consisted of Nansen, three other Norwegians, and two Laplanders. No dogs or reindeer were taken.

Their food, instruments, and other necessities were packed in five hand sledges. Securely lashed to these were six pairs of ski. Imagine a pair of wooden skates about 8 feet long and from 3 to 4 inches broad. To skim swiftly across the snow in these long pieces of narrow wood is not so simple as it seems. But to one thoroughly "at home" upon the ski there is no better means of travelling over snow. Now Nansen's party were expert ski runners, and it was by the help of these contrivances that he hoped to cross the "inland ice". The expedition started on 9th May, 1888. A Danish steamer carried them to Iceland. There the captain of a sealing vessel kindly offered to carry them as near as he possibly could to the east coast of Greenland. On 11th June they came in sight of the rugged, mountainous coast some 60 miles to the west; but although so near it was five weeks before Nansen and his party were able to leave the *Jason*. The icefloes, together with a strong south-westerly current, made landing difficult. On 17th July, however, Nansen determined to try to cross the ice and water which lay between them and the shore. As the guns of the *Jason* boomed out a farewell salute, every man felt that his last link with civilization was severed. The work had begun, and in deadly earnest too. Along the narrow lanes of water which lay between the icefloes they rowed in their boats, using bars, axes, and ice poles to force their way whenever the strip of water was too narrow. But the huge masses of floating ice were never still. Wind and tide set them in motion, and often their frail boats were in imminent danger of being crushed to pieces. At such times they were lifted hastily on to the ice, and

boats and sledges had to be hauled for many weary hours over the rough, hummocky surface, until an opening again appeared. The work was most exhausting, {a foretaste/ of what was in store for them when they should at last reach the "inland ice".

At night they pitched their tent upon the floes, and, creeping into their sleeping bags, slept soundly till morning, unless awakened by the man on watch espying danger to their floating camping ground. Day by day the current carried them farther to the south, but gradually nearer to the land, and on 28th July they set foot with thankful hearts on a small island near the mainland, each feeling it good to have the firm earth once more beneath him. The spot, however, was unsuited for a place of landing. There was still more ice work and much rowing before they felt secure.

While making their way north along the coast they came across an Eskimo settlement. The broad smiles which lit up the faces of these dwellers in east Greenland as they received Nansen and his men into the evil-smelling interior of their skin tents assured the party of welcome and goodwill. What they actually thought of their visitors we can only surmise, for not a word of what they said was intelligible to the travellers.

The interior of Greenland, as has been already stated, consists for the most part of one vast field of ice which, owing to pressure, is being forced slowly outwards towards the sea. Thus into the fiords along the coast immense masses of moving ice are thrust seawards. When deep water is reached, pieces break off from the glaciers

and are carried by currents away from the land. These are the icebergs which are a source of so much danger to Atlantic shipping, for often they float many miles to the south before they are broken up and melted by warmer seas. By the side of some of these floating giants the biggest vessel built would appear but a toy, and danger is never absent when a captain steers his ship near one of them. At any moment thousands of tons of ice may come crashing down, or the whole mass, rendered top-heavy by the undermining action of the sea, may turn turtle. It was lucky for our travellers that on one occasion when this happened they chanced to be camped safely on an island. Had they been in their boats, nothing could have saved them from being dashed to pieces in the wild, angry waters and tossing masses of ice.

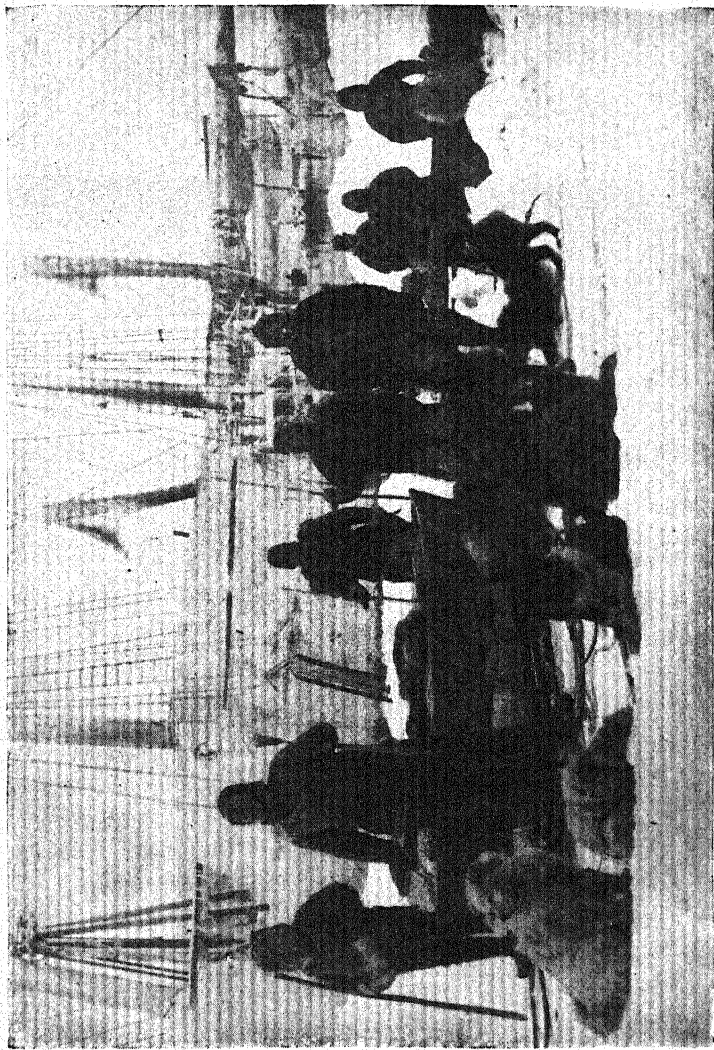
On 10th August they landed, and immediately Nansen started on an expedition inland to discover the best route. That day's work was one of the hardest of all. Walking was extremely difficult, for in places they sank deep into the snow at every step. A constant lookout had to be kept for crevasses, which cut across their track at right angles—(death-traps into which an unwary step might at any minute plunge them.) In places these crevasses were bridged by a frail arch of hardened snow, over which they were forced to crawl cautiously on hands and knees. From the summit of a ridge, after a wearying journey, they saw the "inland ice" stretching away before them, the white monotonous surface broken here and there by protruding fangs of black rock, or nunataks. It was five in the morning before they got back

to the welcome shelter of the tent—their last camp on the eastern coast.

Leaving the boats in a cave, a start inland was made on 15th August. For the first part of the journey they were climbing steadily upward, and arduous indeed was the labour of hauling the sledges. As one member of the party said: "The ropes cut our shoulders till they felt as if they were being burnt". To avoid a sudden disappearance into one of the many gaping crevasses each man was roped to a sleigh; but even with this precaution it was not an enviable sensation to find one's self dangling in space at the end of a rope which might snap at any moment, with cold blue walls of ice on either side, and an unknown depth below. They toiled on, however, and considering the terrible nature of the conditions it is not surprising to find their rate of progress was not much more than 5 or 6 miles in twelve hours. At first they travelled during the night, for, since the temperature was lower then, the snow was harder, and the sledges could be hauled more easily. But as they gradually rose higher and higher, to the inland plateau, this became unnecessary, as the temperature during the day dropped as low as the hardiest of them could desire.

On 2nd September, having reached an altitude of nearly 8000 feet, and the ground having become more level, each man took to his skis. These were used for the next nineteen days, during which time a distance of 240 miles was covered. This journey across the interior was monotonous in the extreme, no striking changes in scenery, no bird life, no animal life to make one day different

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THE START FROM THE *FRAM*

By kind permission of Sir F. Nansen

from another. One day was very like another—an early start, heavy going in drifted snow, halts for food, pitching of the tent at night, and last, but not least, an evening meal in the tent around the little cooker. This was the happiest hour of the day for each of them, and the time came all too quickly for turning in to their sleeping bags in preparation for the toils of the morrow. Usually the flaps of these sleeping bags were securely buckled over, so that a stranger entering the tent during the night might have wondered where its occupants were. So intense was the cold that every precaution had to be taken at night against frostbite. Yet in spite of sleeping with two others, in fur clothing and inside a reindeer-skin bag, it was not at all unusual for one of them to wake with rime frost and ice around his head. To pitch the tent in the evening, too, in a piercing wind, was especially trying. Under such conditions the handling of cords and canvas was a most disagreeable task. When the piercing wind was accompanied by blinding drifts of snow the task was doubly hard. On one occasion a snowstorm of tremendous fury kept them huddled within their tent for hours. To withstand the force of the wind the tent had to be strengthened with skis and poles; and to do this in an Arctic temperature, and in a snowstorm of such severity that no object could be distinguished more than a couple of yards away, and of such violence that a man could not stand upright against it, was both difficult and dangerous.

It will probably be a great surprise to learn that the travellers suffered most, not from the cold, but from thirst. On all sides were ice and snow, yet water was

lacking. Each man carried a flask, fitting closely to his body, and into this ice or snow was placed, to be melted by his own bodily warmth. This, of course, took a long time, and only a small quantity of water was the result. But men working as hard as they did in hauling needed a large quantity of water: and this they could not get. On reaching the land on the western side one of the most cheering things to them was a lake of beautiful clear water, of which they drank again and again, as if they would never be satisfied.

When they had got halfway across the island, Nansen decided to try the experiment of "sailing". The experiment gave some variety, and on one or two occasions not a little excitement. With a stiff wind behind them, a good surface, and a slight fall in their course, the pace became exhilarating. But the farther they got, and the steeper their descent, the greater was the danger of a sudden spill into one of the crevasses which now made their appearance on the west side of the island. Yet sailing, although perilous, was certainly preferable to the dreary and slow work of hauling.

As they descended on the western coast the ice became worse in character, and all attempts at sailing were abandoned. Once again the sledges had to be hauled; but the task was lightened by the knowledge that land must be near, and their work wellnigh accomplished. Over huge hummocks of ice, through narrow passages between jagged cliffs, and over fairly level stretches they pushed, lifted, and dragged their sledges, until on 19th September land was seen ahead. Five days later the ice and snow were behind them for good. Before them lay a sparkling

lake and heather-clad hills. They had at last reached the land. And just as sailors, having been long at sea, rejoice to set foot again on the firm earth, so Nansen and his men, having been for so long in a "sea" of ice and snow, rejoiced greatly on regaining the land.

A boat was built, and without further mishap the settlement of Godthaab was eventually reached. Greenland, for the first time, had been crossed from east to west.

Farthest North

Nansen's first great achievement was the crossing of Greenland from the east to the west coast. This was a noteworthy performance, but he was soon planning a still greater undertaking. Previous observations had led him to believe that from some point between the Pole and Franz Josef Land a current flowed from the Siberian Arctic Sea to the east coast of Greenland. Therefore he concluded that if he could make his way into the current where it flowed north, his ship would be carried right across the polar area. Even if firmly fixed in the ice the ship would still be drifted by the current towards the north—perhaps across the actual Pole itself. Progress, of course, would be slow, and the danger of having the ship crushed by the ice would be great, but Nansen felt sure that the chances of success were promising.

He spent a long time working out details of equipment, and came to the conclusion that a small but exceptionally strong ship of broad beam and rounded hull, with enough supplies for twelve men for five years, would be best suited for the purpose.

A public subscription was started, help was given by the Norwegian Government, and eventually the *Fram* (Forward), a vessel of about 400 tons, was built and equipped. Plentiful supplies of preserved foods were stowed on board, and countless articles that might prove useful, including a printing press, and even a small dynamo to supply electric light during the darkness of the long polar winter, were taken.

In the clothing of his party Nansen made an important innovation. Instead of the usual fur, thick woollen underclothing was worn, and for the outer dress a light, windproof cotton material which would keep out the fine particles of driven snow.

The start was made on 24th June, 1893—the thirteen men, all of them in splendid physical condition, knowing that not only absence from home and friends for several years was before them, but even a great chance of meeting death in those icy regions, which so jealously guarded the long-sought-for Pole. But all had implicit faith in their leader and his ultimate success.

While making her way along the Norwegian coast, the *Fram* met with a great reception. Hardy fishermen pulled from the shore in boats to see, and to shout words of encouragement to, their fellow countrymen, who, like their Viking ancestors, were going to win glory or death in an unknown land.

At last Vardo was reached. Here the explorers left civilization behind them, and on 24th July came in sight of the first ice—ice that was to be their constant companion for years.

Making their way with little difficulty through this,

they came to Vaigats Island, where a halt was made and thirty-four Eskimo dogs were taken on board. These had been brought from Siberia and were awaiting Nansen's arrival. With them he intended, if the course of the ship did not come up to expectations, to make an attempt to reach the Pole on foot. Most of the animals had long, snow-white hair, with sharp, upstanding ears and pointed muzzles. A few, however, were brown or grey. They were evil-tempered creatures and fought among themselves. Indeed, during the expedition, quite a number of the dogs were killed by their companions.

While waiting here, excursions were made inland, and the travellers were able to see the tundras in their summer garb. For miles these flat stretches of land were covered with saxifrages, poppies, forget-me-nots, bluebells, and other wild flowers, reminding the explorers of their own native land. As the sledges were handy, the dogs had their first trial in harness, and a most exciting time it proved. With difficulty a team was harnessed to one of the sledges and a start was made. A stop followed almost immediately, for the dogs ran everywhere but straight ahead. The sledge was soon overturned, and the attempt ended with a furious fight amongst the dogs themselves. However, after a liberal application of the whip, order was restored, and the animals began to see what was required of them.

Vaigats was left on 3rd August and the Kara Sea was entered. The coast was very flat and desolate, but, some reindeer being seen on shore, a hunt was organized by which Nansen hoped to supplement the provisions he had aboard. It proved a most arduous task, for the

reindeer were so timid that the stalking had to be done on hands and knees on the bare frozen earth. However, success crowned their efforts, and they obtained twenty-one reindeer and two bears. To get them to the ship was no easy matter, for the currents had shifted, and it was only after some hours hard rowing that the hunters regained the *Fram*.

Much to the surprise and joy of all, brilliant sunshine was experienced. This was strange in a land so far north, and so astonished was the engineer that he mistook a sunbeam shining through the hatch on to the coal dust for a plank, and leaned on it!

Cape Chelyuskin, the most northerly point of Europe, was reached on 10th September, and the event was celebrated with great rejoicings. Punch, fruit, and cigars were handed to all the travellers, while the musical members of the crew gave selections on the organ which they had aboard. A few days later Nansen and two of his companions had a very narrow escape. While out in one of the boats they came suddenly upon a school of walrus, which surrounded them. Matters looked serious for a time. To feel the boat give a lurch, and then to see appearing over the side a huge head, with large solemn eyes and two enormous tusks, was rather alarming. The creature, however, was equally alarmed, and dived quickly under the water. Two of the walruses were killed and furnished food for the crew.

Clear water was coming to an end now, ice floes were seen on every side, and progress became much slower, until, on 25th September, 1893, the *Fram* became firmly fixed in the ice. The first part of the great undertaking

was now accomplished, and time alone would show whether Nansen's theory would work out to a successful issue. It remained for the daring explorers to possess their souls in patience and to make themselves as comfortable as possible during their long wait. The ship was thoroughly overhauled—a smithy, a shoemaker's shop, and places for sailmaking and ropemaking were arranged, and even a windmill was erected on board for driving the dynamo. Then the dogs, which had been kept in close confinement since their arrival, were loosed. They quickly showed their appreciation by dashing about with joyful barks, and ending up with a terrific fight, from which several emerged torn and bleeding, but happy.

About the beginning of October ice-pressure on the *Fram* was felt. This was a time of great anxiety for Nansen, since the success or otherwise of the expedition rested on the ability of the ship to withstand the pressure. The vessel was lifted up, sank back, rose again, and finally rested once more in its old position. Not a plank gave, not a single weak spot could be discovered. The ship had proved its worth. Some of the crew now for the first time saw ice packing. It was a wonderful sight. The floes of ice, broken up by the tides or by the warmth of the past summer, were lifted up by the waves and hurled with a tremendous crash against each other or against the coast. The shocks were terrific, and, since they were taking place on all sides, the uproar was appalling.

Nansen was careful that every man of his crew should be able to drive a sledge, since, in case of the *Fram*

having to be abandoned, it would be the only means of return. Their first attempts were highly amusing. The dogs seemed to know that the drivers were not accustomed to the work, and accordingly went every way but the right one. The perspiring driver lustily applied the whip, the harness became entangled, and the attempt generally ended in man and sledge being overturned, amidst cheers from the rest of the crew.

On 2nd November the crew of the *Fram* saw a most glorious display of the Northern Lights. It was a scene never to be forgotten. A great band of radiance of no definite colour stretched right across the sky. From this, above and below, projected bright pennants, which changed from amber to gold, then, in a flash, to violet or silver, while the streamers waved through the heavens as if blown by the wind. Once again the whole sky shone rose pink, which changed in a moment to a most delicate shade of bluish green. The crew stood silent, entranced with the scene, nor moved until the last light had gradually died away.

Up to this time few animals had been seen by the explorers. Not even bears, which they had expected, could be found; for the Polar bear is a solitary animal, roaming the floes, and seldom coming to land. It does not hibernate, as is generally supposed, although the female bear, after the birth of its cubs, remains secluded for a time in some kind of cave or snow shelter which it has prepared. Its usual food is the flesh of the seal, though when hungry it eats almost anything. On one occasion, attracted by the smell of food, one of these creatures got on board the *Fram*, and three dogs disappeared. On

the alarm being given, the bear turned and attacked Henriksen, one of the crew, but was finally killed. When morning came, search was made for the dogs, and the half-eaten bodies of two were found, while the other one came back to the ship next day. A bear trap was set up on the ice, but with no success. One bear did trot up to it; but after snuffing it suspiciously he decided to leave it alone.

Christmas Day, 1893, was spent amidst great rejoicings. Work was abandoned, and everybody did his best to make the day a success. Games were held on the ice, while in the evening the whole party sat down to a first-class feast. Songs were sung, recitations given, while punch and cigars were free to all. Toasts were drunk to all their absent ones, and the day finished with everyone superlatively happy.

Towards the end of January, 1894, the strength of the *Fram* was again tested. Big floes, crashing into each other, piled themselves into high walls on each side of the ship. The vessel, however, nobly kept up its reputation, and not a plank gave way. Observations taken on board showed that she was drifting slowly, very slowly, to the north, and also to the west, although on some days the drift was actually southwards. On 2nd February, much to the delight of all, 80° N. was passed.

About three weeks later Nansen determined to make an expedition on snowshoes, and also by sledge, to take observations of the land in various directions. While returning, their first great snowstorm was encountered. The snow came down in a blinding storm, while the

oil were all got ready, while the dogs were freed from confinement. However, the ship proved her worth, and the danger passed.

On 26th February Nansen and Johansen left the ship, but were forced to return twice, once because of an accident, and once to reduce their loads. It was not until 14th March that a start was really made. Their dress consisted of two woollen shirts. Outside these was a camel's hair coat and a thick, rough jersey. On their legs they wore woollen drawers, and over these were knickerbockers and loose gaiters of Norwegian home-spun. As a protection from wind and fine driven snow a kind of cotton canvas overall was worn. Their foot-gear consisted of loose stocking legs, and socks and Finnish skin shoes. As gloves they wore wolfskins over woollen mittens; their heads were protected by felt hats covered with cloth. They also had with them a light tent and a cooking stove.

Very slow progress was made, as the ice was covered with hummocks, and the task of dragging sledges over these was enormous. The two men were soon compelled to kill some of the dogs as food for the others, and on reaching $86^{\circ} 10' N.$, the most northerly point yet reached, Nansen decided to turn homeward. Two hundred miles had been covered in about three weeks, while the leader himself went 2 miles farther on "ski".

On 10th April, 1895, the return journey began, and it proved much easier than the outward one. Nansen's object was to proceed southward, as on crossing Franz Josef Land he expected to meet with some whaling vessel in its winter quarters. But they made headway

slowly. Their dogs were put on short rations, and great were the rejoicings when Nansen managed to shoot a seal as it lay asleep on the ice. All through June and July the explorers struggled on, killing off their dogs one by one, and living on the flesh of several bears which they managed with some difficulty to kill. On 5th August a bear attacked the dogs, and on Johansen going outside the tent to see what the trouble was, the animal turned on him. Before he could retreat, a blow from its paw knocked him over. But luckily the bear was then harassed by the dogs, and Johansen managed to crawl aside. Nansen, who had been awakened by the shouts and barks, now came out of the tent, and with a couple of shots killed the bear. A few days later they had another exciting experience. The two men were out hunting when they were attacked by a huge bull walrus. For a time affairs looked serious, but well-aimed shots from one of their guns ended the life of this unwieldy monster. Land was soon afterwards reached—on 8th August—and good progress was made along the coast. The two kayaks were lashed together, and a sail was hoisted; the stiff breeze which was blowing meant an increase of several miles per day in their journey. As winter was now coming on, a hut was built, and it was decided to make it their winter quarters. This dwelling was made of stone and roofed with their light silk tent. Walrus bones were used for spades and mattocks, and both travellers suffered severely from working in such bitterly cold weather. The hut, when finished, was not an imposing edifice, although a great improvement on their tent. It stood 3 feet above the

ground and 3 feet below, but was not long enough for them to lie at full length. Their next task was to get provisions for the winter, for Nansen had determined to save the food they had brought from the ship in readiness for the journey southward in summer. Indeed it was only on Christmas Eve and New Year's Eve that this food was touched at all.

Several bears and a number of walrus were shot, and their skins were used for roofing the hut. A number of improvements also were made in their dwelling place. A sleeping shelf was put up, a hearth was made, and, with great difficulty, a chimney of ice and snow was erected.

They entered upon 1896 with some misgivings, for their stock of walrus and bear flesh was getting low. But greater was their dismay when they examined the provisions which they had brought from the *Fram*, and found that the whole of the food was mouldy and unfit for consumption.

Their appearance by the end of the winter spent in their small hut was a rather terrifying one. Not one of their shipmates would have recognized them. Their skin was almost black, while their hair had grown so long that it hung down on their shoulders. Their clothes were filthy and full of grease, although several attempts had been made to clean them.

In the spring more bears were killed, and, their boots and clothes having been repaired, they began their journey south on 19th May, with raw blubber, walrus, and bear flesh as their only food. On the twenty-third, Cape McClintock was passed, but here they were compelled to

draw the kayaks ashore and to remain for some days owing to a terrific snowstorm. The snow almost blinded them, their feet sank deep in the soft layer which spread all round them like a thick carpet, and it was with thankfulness that they at last found some kind of shelter under the lee of a cliff.

Some days afterwards they had a very narrow escape from death. While on land, the kayaks, having everything on board, broke loose from their moorings. It was no time for consideration. Nansen at once plunged into the icy water and swam towards the boats. But, weighed down by his furs, the task was almost hopeless. Yet on he struggled, with the knowledge that to fail meant certain death for both. Thoroughly exhausted, and nearly dead with cold, he managed to get aboard one of the boats. Happily no serious results came from his icy dip.

On 17th June both the explorers were startled by hearing a sound which was unmistakable. It was a dog's bark. They waited, and the sound came again. There could be no mistake. Human beings were near at hand. They hurried on, their hearts beating with joyful anticipation. At last they saw a figure ahead—a human figure. It was Mr. F. G. Jackson, who had been wintering there with his expedition, and who was amazed and overjoyed to see them. On discovering who his visitors were he overwhelmed them with congratulations. When they arrived at Jackson's station cheers greeted them, and after hearing the news of the previous three years they indulged in the luxury of a bath and shave.

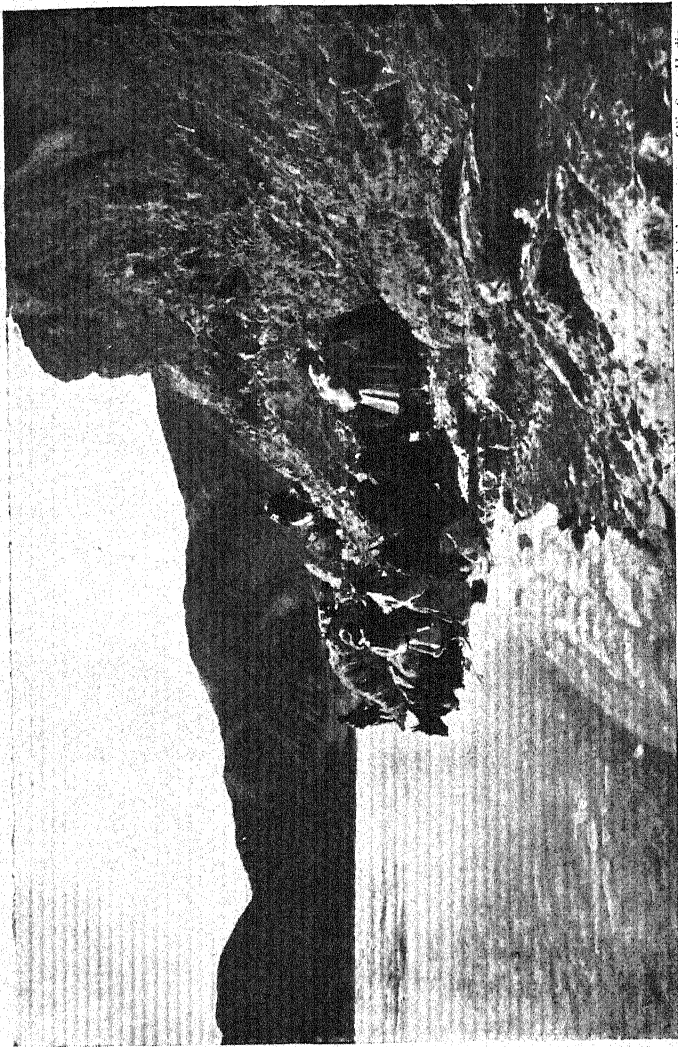
Their great journey was over; they were on Franz

Josef Land, and could await with equanimity the arrival of the Jackson relief ship, the *Windward*. Their one anxiety was to get back to civilization and to learn if any news had been heard of the *Fram*, which, according to Nansen's theory, should have broken through the ice by that summer. On 26th July the *Windward* arrived, and Nansen and his companion again reached Vardo on 13th August, having been absent over three years. Their first enquiry was for the *Fram*, but nothing had been heard of her, (and both their hearts sank.) Having been royally treated at Vardo, the two travellers proceeded to Hammerfest. There they received the glorious news that the *Fram* had arrived at Vardo, having broken out of the ice into clear water on 13th August. Curious to relate, this was the very day on which Nansen and Johansen had arrived at Vardo. The great undertaking was over, "Farthest North" had been reached, and Nansen's theory was proved correct. The three years' voyage had ended without the loss of a single life and without a case of serious illness.

In Central Asia

Imagine the loftiest tableland in the world, where the people breathe air with less than half the density of ours, a country of perpetual rains, giving rise to the mightiest rivers of the Old World. Such is Tibet, more than six times the size of Great Britain, almost as cold as Greenland, much of it higher than the Alps, and, except in a few sheltered valleys, destitute of inhabitants.

This was the land, practically unknown, which Sir



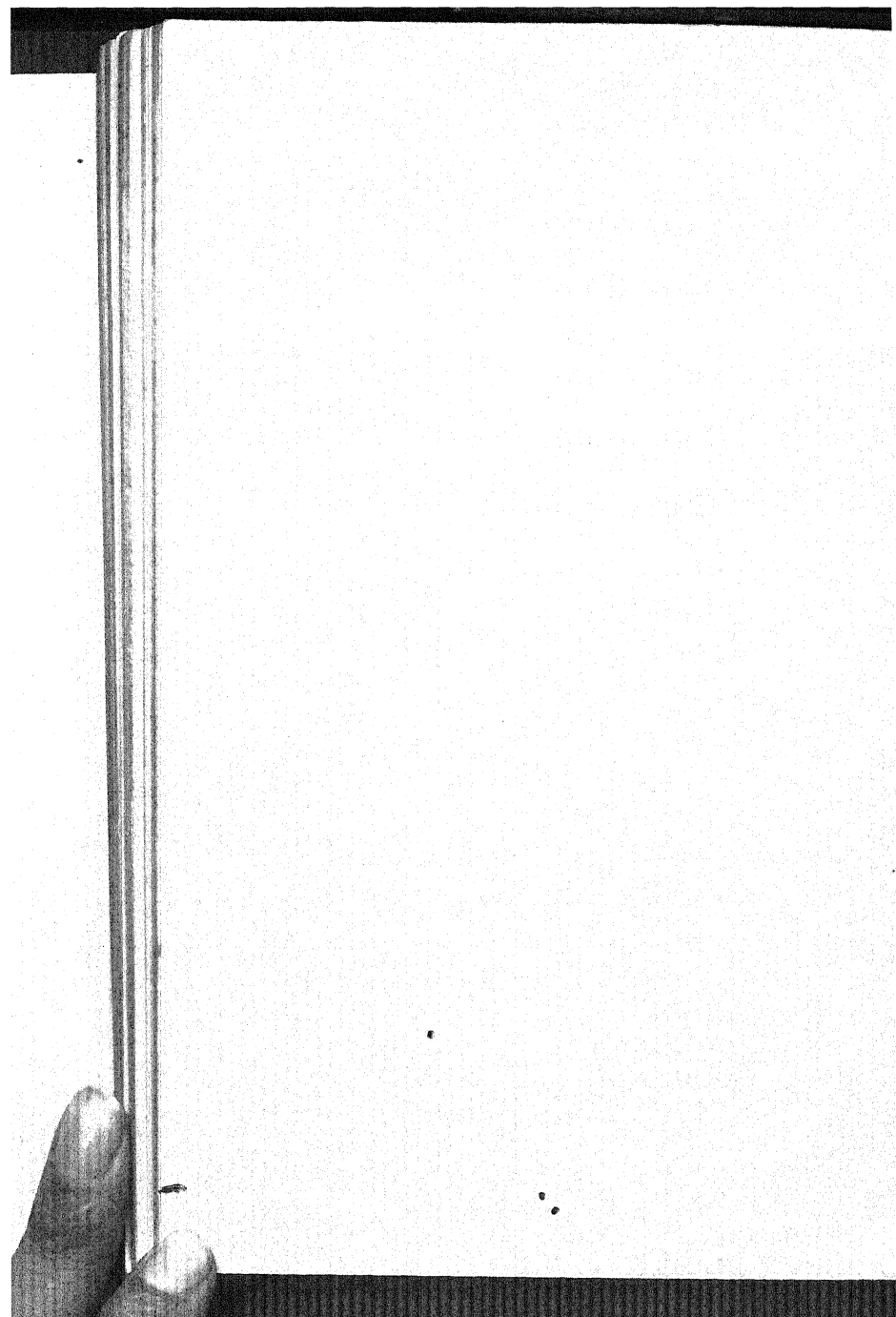
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By kind permission of Sir Sven Hedin

SIR SVEN HEDIN IN CENTRAL ASIA

A difficult passage on the northern shore of Tso Ngombo. Note the frozen surf

Handwritten notes on a separate sheet of paper, including the words "COLL", "H", "OHLO", and "MY", along with various numbers and symbols.



Sven Hedin, the great Swedish explorer, intended to traverse in order to reach the holy town of Lhasa, the seat of the Dalai Lama, High Priest of Tibet. He received much help both from the King of Sweden and the Czar of Russia, who gave him a passport through all his dominions. A start was made from Stockholm on Midsummer Day, 1899, and the first part of the journey lay through Russia, Caucasia, Transcaspia, and Western Turkestan until Osh was reached. From here the mountains were crossed by high passes until the party came to Kashgar, which was the real starting-point of the expedition. The explorer left this, the most important town of Eastern Turkestan, accompanied by Islam Bai, one of his attendants on a previous expedition, and two Cossacks, who had been appointed as his personal escort by the Czar's orders. Sven Hedin's intention was that the whole caravan should proceed to Lailik, on the River Yarkand Daria, and that he, with a small party, should then sail down the river to the Lop region, while the caravan should go overland and meet them there. The start was inauspicious. No sooner were they out of the town than fearful thunderstorms broke upon them. The rain descended in sheets, everything was soaked in a few minutes, while the camels, loaded as they were, could not keep on their feet because of the mud into which the road was soon churned. The next day, however, brought better conditions. The sun was shining brightly, branching trees formed a natural archway over the roadway, and orchards and gardens were seen on every hand.

Arriving at Lailik, preparations for building a ferry

boat were begun, and, largely owing to the exertions of the headman of the village—or rather his whip—it was soon finished. A lighter one, for carrying provisions and other baggage, was also made.

The river journey began on 17th September, with Islam Bai, Kader, and four men to pole the boat along, for the course of the river was very winding. In places the water was exceedingly shallow, and rapids were frequent. When the boats stuck, the help of the villagers on the banks was required to get them off. These, working half-naked, paid little attention to the bites of the swarming gnats, which, however, gave the explorer many an unpleasant moment. Their way lay through magnificent forests, with poplars coming right down to the water's edge, and thick undergrowth lining the banks of the river on each side. Indeed it seemed as though they were sailing along a canal rather than a river, the sides were cut so sharp and clean. The men often indulged in fishing, using a 16-foot rod made of tough wood and sharpened at the end. Near the point were two hooks, loosely fixed, and tied to the rod by a cord. Kader became quite an expert at this spearing, to the advantage of the breakfast table. Several times herds of black and brown swine came down to stare at the intruders, but scampered off into the brushwood long before a shot could be aimed at them. (So calm and clear were the nights that often the journey was continued instead of mooring up.) The moon poured its silvery light upon the calm water, while deep silence reigned around, broken only by the sweet airs of Hedin's musical box.

(From time to time bands of horsemen appeared, ap-

parently hunting parties, for falconers, carrying their hawks, were always a part of the parade. Now the fertile country was behind them, and the Tarim, as the river was called, wound its way through a barren, flat district, the monotony of the level surface broken only by a few poplars and tamarisks. One night the whole party turned out on hearing reports like those of heavy guns. In the morning they found that great slices of the bank had broken away, causing the noises of the night.

At another time, in the dark, they almost ran full tilt into a poplar stem, sticking up in the middle of the river, and only the dexterity of Alim, one of the boatmen, saved them from disaster. Fresh supplies of sheep, fruit, hares, and pheasants were taken on board at Terez, and here, at the beginning of November, they experienced their first winter's day, although the cold was not at all unpleasant. Several times they partook of dinner on shore, the meal generally consisting of rice, meat, and vegetables cooked together in a large pan.

Intercourse with the natives became difficult, for they fled at once on seeing these strange boats. Tigers were not uncommon in this part of the country, and a trap was discovered one day resembling an English rabbit trap, but with much stronger teeth and springs. From time to time they came across rows of fish drying on the banks, and dried fish skins fixed on a tree, which they afterwards discovered acted as notice "boards" concerning the fishing rights of that part of the river.

The country now began to change in appearance, great sand dunes rising to a height of 200 feet being frequently seen. The weather was also much colder, and fishing in

the creeks and bays could only be done after the ice had been broken. At a little place called Karaul, Sven Hedin met Parpi Bai, an old friend, who had been with him on his previous journey across the Desert of Gobi. Here he received warning that the river would soon be impassable, for above this point the stream narrowed considerably, and, moreover, ice was already beginning to form. An anxious lookout was therefore kept for the caravan, which was known to be somewhere in the neighbourhood. 7th December was the last day of their delightful river trip, a journey which had passed all too quickly, for the men of the caravan appeared with the news that they had prepared the winter quarters.

Here a little village sprang up, for the natives flocked in from the surrounding districts, bringing supplies of all kinds, and soon began to look upon it as a meeting place for buying and selling. From the old natives Sven Hedin heard much that was interesting about the desert and the country around. It appeared from them that a long time ago sacred men had been sent to preach to the people of that district, who were then very numerous. They had been received with ridicule and scorn, and some of them killed. The priests had therefore called down the vengeance of the gods upon these impious men, and a great wind had arisen which carried in the sand and buried the cities beneath it.

While here, Hedin met M. Bonin, a French traveller who was returning home after spending many months in this part. They passed a pleasant time together, for it was quite an experience to meet another European in this part of the world. After his departure a start

was made across the desert of Takla Makan to Tjertjen, or Cherchen as it was usually called. The Cossacks were left to guard the village, and on 20th December the party began its journey across a district where the sun rarely shines, and where there is "perpetual twilight". Here the explorer had his first taste of Turkestan rice pudding. To make this popular dish, lard is put into the pan; then, when this has melted, pieces of meat, onions, and other vegetables are fried in it. Afterwards rice and water are added to the mixture, and the whole allowed to simmer until all the water has evaporated. The pudding is then ready for table.

Soon after the start they were delayed for two whole days by a sandstorm. The sand, driven by a fierce wind, rose in thick clouds and broke over the little party like waves breaking over the side of a ship. When it had passed, the dunes were higher than ever, and it was over these that the way lay. The camels, indeed, when descending, simply kept their legs perfectly straight and slid down the slope, arriving at the bottom quite safe and sound. Later on the explorer came upon an easier path, and the party were able to travel along the *bayirs*, or valleys, between the sand dunes, which lay in the direction they were going. The weather had turned very cold, and on 2nd January, 1900, a snowstorm broke which lasted for four days. The flakes fell thickly and softly, and soon, as far as the eye could reach, a pure-white carpet lay spread all round them. Their tracks were covered up, and the whole plain was buried under 10 inches of snow. Through this the camels struggled on, and at last arrived at Cherchen on 12th January.

From here a ride of 200 miles there and back took the explorer to Andereh, through country never before trodden by a European. On the way the only human beings met were a few shepherds clothed in skins, their faces grimed with dirt, and with typical Tartar features. Having returned to Cherchen, the journey back to Tura-salghan-uy was begun. This was the Tartar name for Sven Hedin's main encampment, and meant "The House built by the Great Man".

While on their way back the party came across two coffins that had evidently been unearthed from one of the tombs that abound in the neighbourhood. They contained the bodies of a man and a woman. From their dress, their method of doing the hair, and from ornaments found in the coffins it was evident that they were not Mongols. The traveller conjectured that they were the bodies of Russian Nonconformists who had fled to that region about 1820 to escape religious persecution. At their encampment, which was reached on 24th February, things were in a very prosperous way. It had grown into a large village and had become a place of call for the caravans passing in that direction. Food was plentiful, for the wild geese were returning for the summer, and boars, roedeer, and pheasants were so abundant that fine shooting could be had all round the camp. Sven Hedin now determined to set out upon his journey to Lop-nor and the surrounding lakes. Lop-nor is the last remains of a sea or great lake which once existed there. The sands, driven before the wind from the Gobi Desert, have gradually encroached upon the cultivated fields and populous and flourishing towns which were once to be

found there. Now they are buried deep under the sand, but memorials of their former greatness are still found in the golden coins, carved woodwork, and bricks of tea which are excavated from time to time.



This region Sven Hedin was anxious to visit, but received a taste of what he might expect in a great sand-storm which raged on the second day. The wind came in terrific gusts, the sand stung like whips, and the camels, unable to stand against the blast, lay prone on the earth with their long necks stretched out flat on the ground.

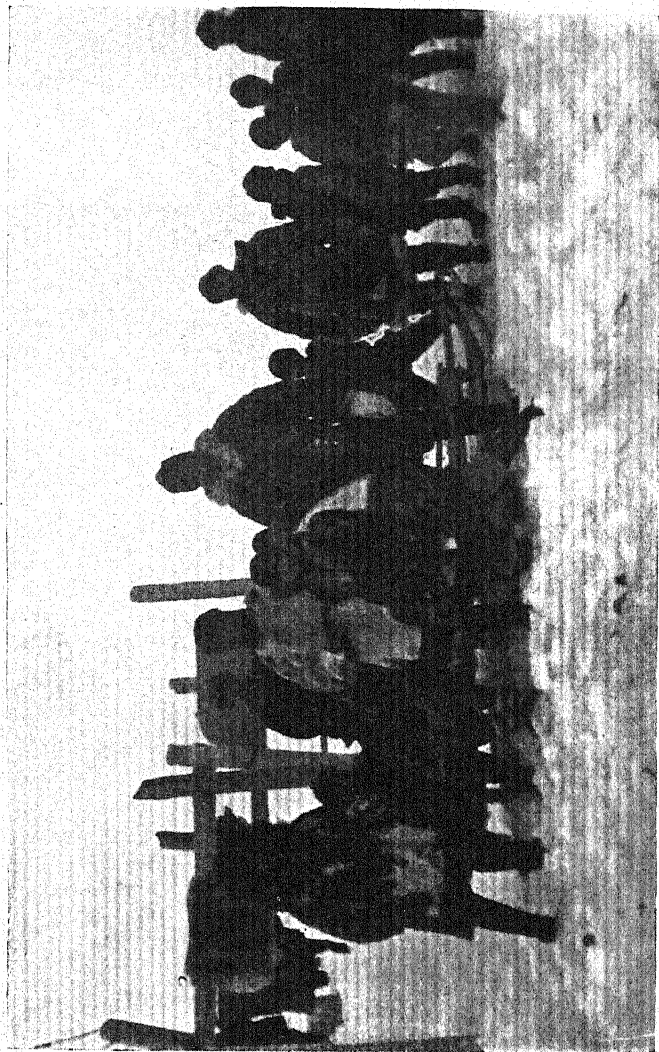
Branches, grass, and even stones were flying about, and it was utterly impossible to fix up a tent. In this neighbourhood wild camels were seen, and one of their party, Abdu Rehim, a famous camel hunter, succeeded in shooting one. The hair was very fine, and its flesh was eaten with great relish by the natives. The oasis of Altimishbulak was at length reached, and a well-earned rest was taken.

One of the men, while gathering firewood, came upon the ruins of three houses, evidently very old. Parts of them were dug out of the sand and several wood carvings were found, one showing a soldier and his helmet, and another a magnificent scroll of flowers. On 1st April they encamped on the shores of Lop-nor.

The whole of April was occupied in exploring the Kara Koshun lakes. A kind of canoe was made from goatskins stretched on a wooden frame. Then one man sat astride a pole fixed in the canoe, and so was able to paddle about the lake, greatly to the astonishment of the swarms of ducks which abounded there. The narrow streams running from the lake were entered, but as they were generally choked with weeds, the canoe had to be hauled back. The banks of these streams were very high, with luxuriant woods coming down to the water's edge, and reed thickets stretched some distance into the stream, almost joining with those from the other side.

Having returned to Tura-salghan-uy early in May, another journey was begun along the river to the south. This time the Cossacks accompanied Sven Hedin and had

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DE WINDT AT EAST CAPE, SIBERIA

with them a sailing canoe. It was a very easy journey, for plenty of shooting was to be had, and although the river was choked with weeds it was passable without much difficulty. The hot weather had now set in, and once the reeds caught fire; but no damage to the boats was done, although the flames approached quite close. Arghan was reached on 2nd June.

Much of the travelling was now done by night, owing to the attacks of gnats and gadflies. Both men and animals were tormented, and no one who has not felt the sting of an Asiatic gadfly can imagine what agony they cause. The camels were in fearful pain. Several times, tortured beyond endurance, the poor animals stampeded in a body, rushing anywhere to try to escape from these innumerable pests.

The river party were able to proceed by torchlight, and their voyage along the river, enlivened by the songs of the boatmen, was a most enjoyable one. The only thing which spoiled their pleasure was the news brought by a messenger that the two Cossacks—Serkin and Shagdur—were to be sent back to Kashgar at once. They had been such good companions that their loss was felt by all. In June they came to Abdull, where a regular stampede of all the animals took place owing to the attentions of the flies. From here they proceeded to the oasis of Tattlik-bulak, from which they could see the great rampart of the Astyn-tagh, which was to be crossed. The scenery as the ascent was made was very wonderful. Waterfalls and narrow streams rushed along the bottom of deep glens whose sides were covered with tamarisks loaded with lovely violet blossoms, while be-

hind them lay the vast expanse of plain and sand they had just traversed.

The Akato-tagh was crossed and camps were made at Temerlik and Mandarlik. Here they were visited by goldminers on their way home, and a maize caravan also remained a day encamped near them. In July a start was made for the Chimen-tagh, and the ascent of the plateau of Central Asia was really begun. Soon they were at an altitude of 13,000 feet, and snow began to fall. Kalta-alagan, 15,703 feet high, was crossed at the end of July. While in this neighbourhood troops of wild asses or kulans were frequently seen. A herd was surprised one day, and two foals were captured and brought to camp. They were treated with great care, and fed with milk, but only lived a few days, for wild asses cannot endure captivity. Herds of yaks, the Tibetan beast of burden, could be seen grazing on the sides of the mountains.

The Arka-tagh, about 17,000 feet high, the summit of the great wall guarding Tibet, was crossed at the beginning of August. At this high elevation breathing was difficult owing to the rarity of the air. The slightest labour resulted in shortness of breath and quickened action of the heart. The way now became very difficult; the ground was bad, being in some places a veritable quagmire, while terrific thunderstorms, with the most vivid lightning, drove the animals into a state of panic. This weather lasted throughout August and well into September. Several small salt lakes were explored, and some narrow, but deep rivers, across which the camels swam with the aid of a tow-rope from the canoe. As

food began to fall short, Sven Hedin determined to turn northwards again. Their hunting parties did not have their usual success, for Aldat, the Afghan, the great hunter of the party, became suddenly ill. He was seized with "mountain sickness", and in a delirious state was tied upon a camel, but died in a few days. Several animals were also taken ill, and some died, while food became very scarce indeed. By good fortune some yak hunters visited the camp, and Sven Hedin persuaded them, with the promise of a good reward, to go for a relief caravan to Temerlik. More camels and horses died, and things were looking very black when the long-expected supplies arrived, bringing at the same time the explorer's letters, which had been sent on from Kashgar.

After resting for some weeks at Temerlik, the Lake of Kumkoll was visited, from which they returned on 5th December. On the way a Mongol caravan consisting of about seventy-five men halted with them for a few days. They were carrying a large sum of money as tribute to the Dalai Lama, and were well armed. Shagdur, one of the Buriat Cossacks, invited them to accompany him on a hunting expedition; but they refused, giving as their reason that it was forbidden for them to shed blood while on a pilgrimage. He made several guarded enquiries about Lhassa, but all informed him that the precautions against the entry of foreigners were so carefully taken that it was impossible for one to enter the town. Sven Hedin now resolved to make a special visit to the ruins of Lop-nor, which he had passed in the previous spring. On the journey they came upon an ancient highway. Every hill or piece of rising ground

was marked by a cairn of stones or a ruined pillar, and at one time no doubt the road had been much frequented. This way led right through the Desert of Gobi, which the party intended to traverse. Sand and dust were almost everywhere, although occasionally they came upon belts of fertile land, on which grew kamish and tamarisk trees. Ice was carried for water, and at each halting place this was melted before food could be prepared. Still the sand stretched ahead of them. Camel tracks were observed, but these they dared not follow, lest they should be utterly lost. Their fuel was exhausted, and the whole party was extremely joyful when the oasis of Altimish-bulak was reached for the second time.

The ruins of Lop-nor came into view on 3rd March, 1900, and Sven Hedin spent a month there thoroughly exploring these remains of a lost civilization. Many interesting discoveries were made; various coins, pieces of pottery, and Chinese shoes showed that a large population had once inhabited these regions. The ruins of several houses could be seen half-hidden by the sand; some were of wood, while the walls of others consisted of sheaves of kamish, or of adobe clay dried in the sun. On one piece of carved woodwork which the explorer found was the image of Buddha, and on another was an ornamented device consisting of a fish, leaves, and scrollwork. The fish is most suggestive, showing that at one time a great lake covered this region, and fish in all probability was an important article of food. Carved lotus flowers were also found, as well as blocks of wood covered with writing belonging to the third

or fourth century. The writings on these tablets, when deciphered, were found to be a kind of register in which were enumerated the sizes of farms, and the number of heads of cattle, &c., proving beyond a doubt that Lop-nor was once a fertile and populous country. What has changed this region, where rivers at one time swarmed with fish, where forests and thickets teemed with wild birds and animals, into the arid waste it is now? The change is due to the fact that the Tarim has altered its course. Once the lakes received their supplies of water from this river. Afterwards they gradually dwindled away and sank into the sand of the desert, and the towns and villages were overwhelmed by the sandstorms which blew in from the Gobi.

After spending some weeks at Lop-nor the party returned, and Charkhlik was reached on 8th April. There they rested for some time, a house being allotted to them in an orchard near the residence of the Chinese governor. Preparations for the great journey into Tibet were begun. Mongolian dresses had to be obtained (for to go as Europeans was impossible) and provisions of all kinds had to be gathered in.

On 8th May, 1901, the caravan, which was one of the largest that had ever left that part of Asia, started in detachments. It consisted of eighty loads carried by horses, camels, and asses. Just as they had begun the journey, Shagdur, one of the Cossacks, who had been sent to secure the dresses, returned, bringing with him a real Tibetan Lama, named Shereb, whom he had met on the way. He was dressed in a long flowing red garment like a nightgown, held together at the waist

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by a yellow girdle, while on his head he wore a Chinese skull cap. This arrival delayed them for a time, as did the discovery that one of Sven Hedin's most trusted servants had been carrying on a systematic robbery for months. It was not until 17th May that the journey to the plateau land of Tibet began. Sven Hedin was accompanied by Shagdur and Serkin, the Cossacks, two Mussulmans, the Lama, a guide, twelve horses, and a dog, which always acted as an extra guard. The border ranges were crossed, and on reaching the tableland herds of kulans could be seen, feeding on the slopes. Some time was passed by Hedin in learning Mongolian from the Lama, and explaining the object of the journey to him. When he heard that Lhasa was their goal he was very uneasy, and it required all the persuasive power of the leader to keep him with the caravan. He said he would consider the matter, and on their arrival at Kumkoll, where the other detachment met them, he finally decided to stay. The united party set out once again on 4th June, and immediately found itself in difficulties. Rain had begun to fall, and soon they were in a fearful quagmire, where camels and horses stuck fast, being extricated only with difficulty. The men were up to their thighs in the mud, and at last the whole party turned back to find a better and safer road. While pitching camp that evening a Tibetan bear approached them. This animal lives quite a hermit's life and is rarely seen. It was shot at, and on running away was followed on horseback and killed.

The travellers now experienced a worse time than ever. Whilst crossing the Arka-tagh a terrific snow-

storm occurred, driving full into their faces. Unable to see their way, they struggled on; but several camels refused to advance, and were left behind. The storm raged for days. Camels and asses died, and each day saw their company lessened by the exhaustion and death of some of their pack animals. It was not until the beginning of July that the crossing was effected, and even then many of the weaker animals could not keep up with the main body. The rainy season had commenced in full earnest; every day rain descended in torrents, or hail and snowstorms burst upon them. Tracks rapidly became swamps, in which men and animals stuck fast. The only events that enlivened the dull monotony of this part of the journey were the appearance of some yak hunters, who fled at their approach, and an attack on Shagdur by a mountain wolf as he was getting water at one of their halting places.

By now it was obvious that the whole caravan could not hope to reach Lhasa, and Sven Hedin determined that he, accompanied by Shagdur and the Lama, should make the dash alone. So the Mongol dresses were put on, and the usual outfit of pilgrims—rosary, case for a sacred talisman, knife, chopsticks, pouch and pipe, flint and tinder—was carried by each. The next thing was to remove all hair from their heads. Shagdur first cut it short, and then their heads and faces were shaved. Their faces were afterwards smeared with grease, soot, and other colouring matter. When this had been done, few would have recognized Hedin and his Cossack companion as Europeans. Signs of being watched by Tibetans had not been wanting, and on the second night

of their journey robbers crept quietly up to the camp and stole their two best horses, although a man and a dog were on guard. It was hopeless to follow them, for the night was pitch dark, and horses and men had vanished before a hand could be raised against them.

Shagdur now acted as leader, with Sven Hedin as his servant, and on 1st August they came upon their first Tibetan encampment. The chief, an old man named Sampo Singhi, wore a felt cloak and felt boots, and was as extremely dirty as most Tibetans. They tried to obtain horses from him to replace the two stolen, but he refused to part with any. They therefore proceeded on their way, meeting with several caravans from Lhassa. By one of the largest of these they were stopped. The chief first questioned them, and then decided to detain them until orders had been received from Lhassa. The little party was treated quite well, food being given to them, for which the chief would receive no payment, although a charge past by the horsemen of the caravan, firing their long muskets and waving their spears, was evidently meant to impress the strangers with their strength.

At last the chief of the district, Kamba Bombo of Nakkchu, as he was called, arrived with a large company, he himself making quite an imposing spectacle in his robes of state. He wore a dress of bright-yellow silk, with wide sleeves. On his head was a blue Chinese skull cap, while his boots were made of the brightest-green velvet. As soon as he appeared before Sven Hedin's tent an attendant dismounted and laid down

a carpet for the governor to stand on. He questioned the travellers very closely, and finally told them they must turn back. Protests were of no avail. He said that he was simply carrying out his orders from Lhassa. An escort of Tibetan horse accompanied them, and the little party got back to camp towards the end of August, where they enjoyed a wash, a luxury of which they had been deprived for nearly a month. The whole caravan then proceeded on its way to the south, being followed by the Tibetans, who prevented passing caravans from selling them food, and by threats, promises, and entreaties endeavoured to get them to turn back. It was a fine country through which they were passing, geese, pigeons, kulans, and antelopes being seen in great abundance. Here one of the men—Kalpit, a Mussulman—was taken ill and died. His companions buried him with full Moslem rites, burning his tent, clothes, and boots above his grave.

More messengers now arrived from Lhassa. After an interview with them Sven Hedin finally decided to turn back and make for Ladak, as he saw it was hopeless to proceed. The journey back was commenced on 14th September, 1901, with the Tibetan escort still in attendance. The first part of the journey was along the Chargut-tso. Sven Hedin had several sails on the river and on the lakes through which the river runs. Once he narrowly escaped with his life. With one companion he had ventured out in the canvas skiff, when suddenly a hurricane arose. They quickly landed on one of the small islands which dotted the river, but departing before the storm had really subsided, they were again caught, and it was only

after the greatest difficulty that they managed to struggle ashore, their boat being nearly swamped.

At the beginning of October it became very cold, and the wind was so strong that the men were compelled to walk. Lakkor-tso, a salt lake, one of the highest in the world, was seen on 20th October, and then the road became almost impassable, while the weather seemed to increase in violence. Many of the animals died, or had to be killed, and at last only eleven horses were left out of forty-five, and eighteen camels out of thirty-nine. Mohammed Tokta, one of the explorer's oldest servants, had been ill for a long time, and although he struggled on, the effort was too much for him, and another grave was dug on this desolate and windy plateau.

Right through November the bad weather continued, and had it not been for the relays of yaks, with which their Tibetan escort still supplied them, the whole caravan must have perished. At last they reached the town of Noh, on the Tso Ngombo, or Blue Lake, and had a well-earned rest. Noh contained a temple with red and white cupolas and pinnacles, with flags flying on all sides. The houses were flat-roofed, with white-washed walls, edged with red at the top, and flagpoles with streamers stood out from every window. From the town the ice-capped peaks could be seen in the distance, while the lake, with its bays, islands, and creeks shut in by mountains which were reflected in its crystal waters, made an entrancing view.

At length a man was sent on to Ladak for food, and soon this arrived in the shape of sheep, flour, dried fruits, and milk. It was time, too, for many members of the

caravan were on the verge of starvation. After resting a day or two, Sven Hedin, with a small advance party, pushed on to Ladak in order that news of his safe arrival might reach Sweden before Christmas. He arrived there on 20th December, and telegrams were at once sent to his parents, the King of Sweden, and the Viceroy of India, from the last of whom he received an invitation to visit him at Calcutta. This invitation he accepted, taking with him only a few attendants, Shagdur being among the number. The rest he dismissed with presents to their homes. On his return he passed through Leh, where his faithful Cossack was taken ill and obliged to remain. At the end of April Sven Hedin departed from Leh, being carried most of the way in a palanquin to Kashgar, which was reached in May, 1902. For over two and a half years he had been traversing Central Asia and Tibet, exploring lands which no European had ever visited, and making observations whose value cannot be overestimated.

From Paris to New York by Land

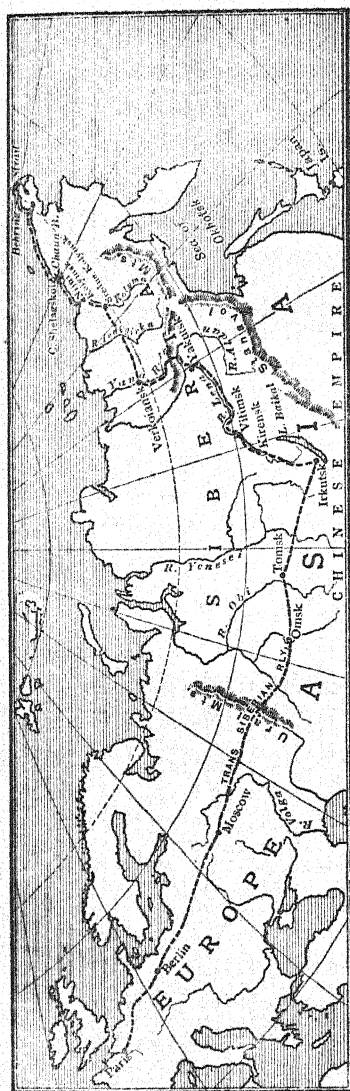
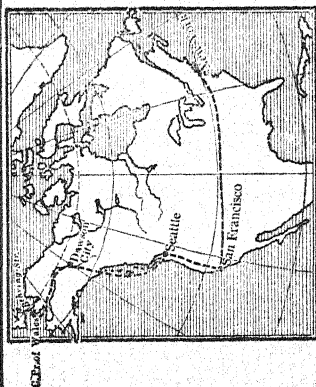
This journey of nearly 19,000 miles was undertaken in the first eight months of the year 1902 by Mr. Harry de Windt, a daring French traveller of wide and varied experiences. In 1896 he had started from New York with the idea of reaching Paris by an overland route via Bering Strait. But on that occasion he did not get farther than the north-eastern coast of Siberia, owing to the hostility of the natives, from whom, however, he was luckily rescued by the captain of a passing American

whaler. Although that attempt had proved a failure it had taught him many lessons, from which he hoped to profit on the second trial. He was most anxious to succeed, for the journey was one that no other traveller had accomplished. He hoped, also, to prove that a railway might be constructed between Paris and New York.

There is no need to deal at any length with the first part of his journey. He left Paris on 19th December, 1901, and Moscow, 1800 miles distant, was reached in three days. During the right season this city proves most attractive to visitors. It is a town of Oriental picturesqueness with its many domes, cupolas, and slender minarets. But to de Windt, who was unavoidably delayed here for some days in the depth of a Russian winter, it was inexpressibly dull and dreary. Nearly a fortnight dragged by before the journey could be resumed. At last, on the evening of 4th January, he and his companions said "Goodbye" to Moscow with thankful hearts, and clambered aboard a Trans-Siberian express for Irkutsk, some 4000 miles eastward and near the southern end of Lake Baikal.

Nine days of weariness were spent on this part of the journey. Sometimes the way lay through dense pine forests; but for the most part, hour after hour and day after day, there was the same monotonous outlook on either side—a landscape of dreary whiteness stretching away to the horizon. The Urals were crossed, and east of these lay Western Siberia with its snow-carpeted plains, over which the train crawled on towards Irkutsk at a speed of something less than 20 miles an hour. On most days the sun shone brilliantly from a cloudless sky,

FROM
PARIS TO NEW YORK
BY LAND.



so that towards noon the temperature within the heated carriages was often much too high for comfort, while outside the mercury would be standing at 10° below zero (Fahrenheit)! On 13th January Irkutsk was reached, to the delight of every member of the expedition. They stepped into an open droshky for a drive of 3 miles, and as they dashed along against a blinding snowstorm, and felt the biting cold upon their faces, they knew that the serious part of their undertaking had begun.

At Irkutsk a stay of five days had to be made. The town at this time had a population of 80,000, made up of people from all parts of Asia. It was a city, however, from which our travellers were heartily glad to get away. The charges at "The Metropole", where they stopped, were higher than those of its fashionable namesake in London, and yet the accommodation was worse than that of a cheap lodging house. The bedrooms were evil-smelling, dark, and dirty; the food was bad, and the slovenly way in which it was served made it even more unpalatable. And Irkutsk itself had but few redeeming features. Its streets were ill paved, its sanitary conditions deplorable; nor was their opinion of the city improved on hearing from the chief of police that within the precincts of Irkutsk there was an average of one murder per day! It is not to be wondered at, therefore, that the travellers were anxious to begin their journey of 2000 miles by sleigh to Yakutsk. They had with them several cases of condensed foods; but, wishing to keep these until the Arctic regions were reached, they purchased an additional supply of tinned meat, tinned fish, and tea for their immediate use. Then, having secured

a passport from the governor, early on the morning of 19th January de Windt and his two companions started. The sleighs in which they rode were simple in construction, cosy in appearance, but very uncomfortable. The Yakute sleigh consists of a bag some 4 feet in depth, slung from a horizontal framework of wood. In this bag, with his luggage stowed away under him, the traveller lies at full length, his body protected from above, if necessary, by a coarse kind of apron. After a night's sleep he probably wakes to find his clothes saturated with moisture from his over-heated body, and is lucky, too, if his face is not frostbitten by contact with the top covering.

Until the head waters of the Lena were reached, some 150 miles from Irkutsk, the route to Yakutsk lay through dense forests of pine. But after this first stage the road was usually the frozen surface of the river. The track was marked by pine branches stuck in the snow. These were very necessary, for in places, owing to the presence of hot springs, the ice was treacherous, and a slight deviation from the track might mean the sudden disappearance of horses and sleigh beneath the ice.

At first the weather was bitterly cold, the thermometer one night registering 65° below zero. This was the lowest temperature experienced south of Yakutsk. Usually the mercury stood somewhere between 2° below and 40° below zero. It is difficult for us in England to understand fully the effects of even this degree of cold; so perhaps the following notes from de Windt's journal will help us to some extent to realize what a temperature of 40° below zero means. Smoking while travelling

was impossible. If a pipe was lit, the nicotine froze in the stem; while a cigarette, a few minutes after it had been placed between the lips, was firmly fixed there by a thin casing of ice. Once one of the travellers wished to take a photograph, and removed his thick gloves to do so. In adjusting the camera his hand chanced to touch a piece of metalwork, with the result that the tips of his fingers were seared as though he had laid them on the red-hot bars of a grate! Their supply of milk, frozen into solid blocks, was carried in nets slung on the outside of the sleighs.

The distances between the posthouses varied from 15 to 30 miles. At each of these, three fresh horses were procured, so that the rate of travelling was fairly good and constant. The average distance covered per day, from Irkutsk to Yakutsk, was a little over 130 miles, a good daily mileage when we take into account the many difficulties against which they had to contend. In places the track was so bad that progress was next to impossible; then one or other of the sleighs was frequently overturned in a snowdrift, and valuable hours were lost in digging it out. At other times blinding blizzards descended upon them with startling suddenness, and they were forced to huddle themselves together in the shelter of sleigh and horses for protection against the fierce wind and driving snow which stung like whip-strokes.

They rarely slept in the posthouses, but travelled night and day; for these hostelrys of "the great Lena post road" were nothing but filthy, verminous, foul-smelling hovels. The temperature within them was

never less than 80° F.; and all that could be purchased at them were mouldy black bread, and, occasionally, eggs of dubious freshness. Nights were more tolerable spent in the sleigh, and if the weather were fine they were even enjoyable. At such times the traveller lay with the *koshma* turned back, gazing upwards into the sky, from which shone myriads of stars with a brilliancy never seen in more southern latitudes. The only sounds disturbing the awful stillness were the crunch of the snow beneath the runners, the tinkle of the bells from the *troika's* yoke, and an occasional grunt from the driver as he urged forward his weary team.

Gradually the distance between them and Yakutsk grew less and less; and a few travellers were encountered, but none they knew. Nor is this to be wondered at, considering how near they were to the northern limit of civilization. But at Vitimsk there was a strange and unexpected meeting. A figure wrapped in furs from head to foot drove up to the posthouse. He alighted, and great was de Windt's surprise when the traveller, unrecognizable in his Arctic robes, walked towards him with outstretched hand.

"Well! If it isn't Harry de Windt!"

De Windt knew the voice at once, and the two friends shook hands heartily. How singular it was, this meeting in that far-distant, Siberian posthouse? The friend was Talbot Clifton, who had been living for some months with the natives in the far north, and was now on his way home. His account of the state of affairs beyond Yakutsk was not encouraging. Reindeer were scarce, and the passes across the mountains blocked with snow.

It was with the greatest difficulty that he himself had managed to get south to Yakutsk.

This was sorry news, but de Windt felt there could be no turning back, and he pushed on northwards. A few days later he met another friend, Dr. Herz, a famous scientist, who had discovered the body of a mammoth, preserved by the Arctic cold, lying at the foot of a cliff. The body of this giant of former ages, cut into sections, filled twenty sleighs. The doctor was hurrying with all speed to Irkutsk, thence to Europe, with his precious find, which eventually was safely lodged in the Imperial Academy of Science at St. Petersburg.

Thence After they left Olekminsk the country became even more dreary and desolate, and the track along the broadening surface of the Lena became daily more difficult to follow. At last, on the morning of 14th February, the monotony of the wilderness of white around them was broken by the appearance of pointed towers and drab housetops. Yakutsk, the north-eastern outpost of Siberian civilization, lay before them. During their stay at this town—"the end of the world" as it is called by the Siberians—they were the guests of the chief of police, a charming host, whose appearance and manners were far different from the severe official suggested by his title. One day they found him in his office deeply interested in the development of some photographic films, and his companion, with whom he was on the most friendly terms, was a political exile! They found Yakutsk to be a city of gloom and depression; and yet they saw it at its best. During the short summer, what with heat, clouds of dust, swarms of mosquitoes, and the

unhealthy swamps around, life in Yakutsk must be wellnigh intolerable.)

The sleighs were now abandoned, and smaller reindeer sleds, or *nartas*, were bought. These were shaped something like a coffin, with a hood for covering. Each was drawn by four deer, two abreast, and from the standpoint of comfort these *nartas* were a great improvement upon the clumsy Yakute sleighs. Here, too, they discarded their European clothes for native furs, without which it would be sheer folly to expose oneself to the rigorous climate of the Arctic coast. Six sleds, two of them stored with food and baggage, sufficed for the expedition, which was here joined by a Siberian Cossack guide who had on several occasions escorted political prisoners to the dreary outpost of Sredni Kolymsk. The chief of police and the exiles under his care did their best to dissuade de Windt from what they considered a foolish enterprise; but all to no purpose. So they bade him "Goodbye" and "God speed", and as the little line of sleds grew dim in the distance the watchers in Yakutsk said: "He is a brave man, but he is going to his death".

De Windt and his companions left Yakutsk for Verkhhoiansk, 625 miles to the north, on the night of 21st February. Great as the hardships of the journey to Yakutsk had been, the difficulties and dangers that lay ahead made them quite insignificant. The Lena posthouses had been bad, but compared with the deer stations, or *stancias*, north of Yakutsk they were almost luxurious. A *stancia* was a small log hut, plastered with mud, with a felt-padded door and a wretchedly low ceiling. The inside was dimly lighted by tiny windows

of ice. A fire of logs was kept burning night and day, making the heat of the dismal, crowded hut almost unbearable. (But to the traveller entering one of these stations for the first time the nauseating odours which assailed him were harder to endure than the heat. Yakute cooking operations seemed always to be in progress; and the smells from putrid meat, from perspiring members of the postmaster's family, and from the one or two animals generally to be found sharing the compartment made the place a reeking hovel of foulness. They were situated along the route at distances varying from 26 to 40 miles. Between them, for the convenience of travellers overtaken by blizzards, or wishing to thaw out a mouthful of food before struggling on to the next station, were *povarnias*. These were simply mud-smeared shelters in different stages of dilapidation. Within them was usually found a small bundle of wood, cut by the last visitors, to serve as fuel for a fire over which the travellers crouched to boil water, wrapped closely in their furs the while, for the temperature within these wind- and snow-swept *povarnias* was nearly as low as that outside.

When about 100 miles to the north of Yakutsk an easterly direction was taken, along the frozen surface of the Aldan. Here the travellers experienced the discomforts of frequent upsets, for the reindeer had great difficulty in keeping a sure foothold on the smooth ice. (Holes, too, were numerous, and supreme caution had to be exercised by the drivers to avoid disaster.) Having safely crossed the Verkhoiansk Mountains, which at this point are 4500 feet above sea level, a northerly direction

was taken along the River Yana. At one station, Beté Kul, de Windt accepted the invitation of the postmaster to share his meal. It was a repast to be remembered. The first course was a thick kind of jelly made from the horns of the reindeer, and flavoured with the powdered bark of the pine tree. To the Europeans this concoction was sufficiently disgusting; but worse followed. Large bowls were brought in, filled with pure melted butter, and each guest was expected to drink his portion. The Cossack, being the one guest to whom such food was not quite new, took a few sips. The host and hostess drained their dishes with evident relish. But de Windt and his friends, in spite of smiling assurances from the postmaster as to the virtue of the dish, were forced, with sickly smiles, to leave their bowls untouched.

As they proceeded down the Yana the cold became intense. Even in the sleds, beneath the covering of the hood, the thermometer was often as low as 40° below zero (F.). When they left a *stancia* they were warm, sometimes uncomfortably so. This warmth lasted for two or three hours. Then, as the cold penetrated their voluminous fur wrappings, a chill crept slowly over their bodies. Their limbs, one by one, grew numb and useless. Their faces took on a mask of ice from the frozen moisture of their breath. And, lastly, a dull stupor brought forgetfulness till the next *stancia* was reached, when they crawled or were carried to the restoring warmth of the fire.

Nine days after leaving Yakutsk they arrived at Verkhoyansk, a dreary-looking village of mud huts

and about 500 people—Yakutes, Russians, and political exiles. The chief of police, as at Yakutsk, lived on terms of familiarity and friendship with the prisoners. Many of them were present at a supper given by him in honour of de Windt. The meal was enjoyable, both to visitors and to host. It consisted of fish, of roast venison, of ice cream, and of—champagne! How different from the meal at Beté Kul!

The awful loneliness and monotony of the life at Verkhoiansk for these exiles must be punishment enough for the worst offender. They are cut off from the world as completely as if they were confined within prison walls. Escape is impossible. Tidings from friends far away may occasionally reach them. But the monotony of existence drives many of them mad. The exile is fortunate who has some hobby to take his thoughts away from the hopelessness of his situation. Books, periodicals, reading matter of any kind, are as precious as they are rare. A young exile, who had still twelve long years to stay here, accepted, with tears of thanks in his eyes, the present of a *Daily Mail Year Book* from de Windt. It was to him a heaven-sent gift. "I shall learn it all off by heart, Mr. de Windt," were his parting words.

Having withstood the earnest entreaties of the chief of police to abandon his project, de Windt left Verkhoiansk on 2nd March for Sredni Kolymsk, situated more than 1000 miles to the north-east. The *stancias* of this stage of their journey were of a filthier and more disgusting type than any they had hitherto seen. These stations were as much as 200 miles apart, while every

80 miles or so there were *povarnias*. But a *povarnia* now was often nothing more than a rotting roof supported by four posts, the crazy structure being generally half-buried in the snow.

A few miles to the north-east of Verkhoiansk the most intense cold of the whole journey was experienced—a temperature of 78° below zero. The moisture of the breath was immediately frozen, and fell to the ground in solid particles of ice! Luckily the air was perfectly still. Had there been a strong wind, every man and animal exposed to it must have perished.

This part of the journey was a time of terrible hardship and privation. Once, after battling for twelve hours against wind and snow, a *povarnia* was reached. No food had passed their lips for sixteen hours, and there, in the scant shelter of that dilapidated hut, they had to wait eight hours more for the arrival of the provision sledge; a twenty-four hours' fast in Arctic cold, and twelve of them spent in the fatigue of strenuous travel! So cold was it during one stage that for thirty-six hours not one of the leaders of the expedition dared to sleep at all. Soon after passing the Indigirka River they came to a *povarnia* called "the hundred doors". This name had been given to it on account of the piercing winds which blew through it from all directions. And here a curious accident happened. The travellers were awakened by a loud report, to find that their precious sauce had frozen, expanded, and burst the bottle with a noise like the exploding of a bomb. The pieces of *sauce*, however, were carefully collected, and at future meals solid chunks were bitten off.

The nearer they got to Sredni Kolymsk the more desolate became the country. Vegetation ceased, and as there was not even moss for the reindeer, these had to be exchanged for Yakute horses. In spite of the fiery nature of these sturdy little animals, however, they accomplished the remainder of the journey to the lonely outpost on the River Kolyma without serious mishap, and on 17th March, eighteen days after leaving Verkhhoiansk, they entered Sredni Kolymsk.

Imagine a straggling row of forty or fifty mud hovels, a tottering wooden church, and over the whole village the silence of the grave. Such was Sredni Kolymsk. And it was here that de Windt spent three of the most anxious and gloomy days of his life. The governor would not hear of the expedition proceeding. He had no dogs to sell, no provisions to spare. Without dogs further progress was impossible, and de Windt was in despair. But help came from an unexpected quarter. The Cossack, who had mysteriously disappeared, returned at the end of three days bringing with him sixty-four dogs, which he had procured from a friend 30 miles up the river. The greatest obstacle to their advance was thus removed. A few provisions were bought at famine prices, and on 22nd March, with five sleds, they started down the Kolyma for the Arctic coast.

A journey of 300 miles brought them, six days later, to Nijni-Kolymsk, a wretched village of twenty or thirty huts, inhabited by a few Yakutes and Tunguses, and one Russian, a political exile, who took upon himself the office of governor. Here a fortnight was wasted owing

to the mutinous spirit shown by one of the drivers, who flatly refused to go farther. Every moment was valuable. It was now nearly April, and they must reach Bering Strait before the ice began to break up. If they did not, they were lost. By large gifts of vodka the driver was eventually won over; and before the end of the first week in April they were on their way along the terrible Arctic coast.

Civilization was now behind them. No *stancias*, no *povarnias*, no pine stakes now marked the route. They were alone on the ice-bound coast, at the mercy of the elements—at the mercy of the *poorga*, that pitiless blizzard of these northern regions. Their stock of provisions was small. For fuel they had to depend on driftwood, and their only protection from the cruel Arctic storms was a flimsy, canvas tent!

They had not gone far before a *poorga* burst upon them in all its fury. They sought the shelter of an overhanging cliff, and with frozen fingers managed to put up the tent. But the driving snow penetrated everything. Their furs became coated with a breast-plate of ice; and for three whole weeks these glistening natural shields remained unthawed! Twice during the night was the tent blown down. They had no fire; their only heat, as they huddled together, was the little warmth of their half-starved bodies.

That night's experience was a dreadful reminder of what they might expect before reaching Bering Strait. They pushed on slowly and painfully, lessening by slow degrees the 1500 miles stretching between them and North-east Cape. At 6 a.m. they started and toiled on,

always on the lookout for driftwood. Driftwood meant fire, heat, life: its absence spelt death.

At Cape Shelagskoi they came upon a small native "settlement", if such a term can be applied to a few low huts covered with walrus skins. The occupants were about the most villainous-looking individuals de Windt had ever set eyes on. They gave him seal meat, however, in return for vodka, and with a supply of this food he hastened on eastwards. A week later another settlement was reached. More food was procured—this time in exchange for six dogs. Settlements became more frequent, and at most of them food of some kind or the other could be got. No longer was there any great fear of death from starvation. The weather as they journeyed on towards East Cape varied considerably, the calm air, crisp coldness, and genial sun of one day being perhaps succeeded on the next by an Arctic blizzard of the worst description. But they fought on doggedly. At one settlement they saw a newspaper that had been printed in San Francisco two years previously, and must have been left there by the captain of some American whaler. The sight of it encouraged them greatly, for it told them that they were nearing civilization.

The approach to Cape North was terribly difficult. The ice in places was piled into huge, irregular hummocks, 60 or 70 feet high, and over these the sledges had to be lifted and dragged, work that was both laborious and dangerous. Beyond this cape, however, they made good progress over the smooth surface of the tundra, arriving at Koliutchin Island on 10th May. Ten days later they found themselves amongst the dwellers on the Asiatic

shores of Bering Strait. They had reached East Cape, and the most difficult part of their journey was accomplished.

For five weeks they lived with the Tchuktchis, the native inhabitants of this faraway corner of Siberia. They were waiting for an American boat, which was to call for them at East Cape, as soon as the ice had sufficiently broken up, and carry them across to the American mainland. The time of waiting passed slowly. There was little to do, and as soon as the straits began to get free of ice de Windt and his friends kept an anxious lookout for the American "cutter". They were anxious for more than one reason. The Tchuktchis, at whose mercy they were entirely, were not to be trusted, and on one or two festive occasions, when most of the natives became drunk, the lives of the travellers were in great peril. In addition to being treacherous they were indescribably filthy, two considerations which made it desirable to leave them. The American cutter appeared on 18th June, de Windt arranging with the captain to be landed at Cape Prince of Wales, on the American side of the straits. But the *Thetis*, for such was the name of the cutter, could get no nearer than 6 miles to the coast, owing to ice. An Eskimo boat was sent out from a settlement on shore, and after four hours' hard rowing and scrambling over ice floes the expedition safely landed on American soil on 19th June, 1902, exactly six months after leaving Paris. They were given shelter in a hut adjoining the house of a missionary who was labouring amongst the Eskimos of north-western Alaska. These natives de Windt found to be even worse than the

Siberian Tchukchis, except, perhaps, they may have been a little less unclean in their habits.

Ten days were spent here, and then a short sea trip in an American steamer brought them to Nome City. Four years before de Windt's visit this town had consisted of two or three log huts. Imagine his surprise when he now found it a considerable city, with hotels, churches, theatres, and fine buildings. A visit had to be paid at once to a tailor for a new "rig out", for it was quite out of the question to walk about the crowded streets of Nome City in the clothes which had done such yeoman service on the Arctic coast! The reason for this sudden growth of Nome City and other Alaskan towns is to be found in the great discoveries of gold in the Klondike and other districts of north-west America. At St. Michael, the terminus of the Yukon boat service, de Windt saw a new building near the beach. It was a circulating library, and he recognized the site as being the spot on which had stood the hut of an Eskimo fisherman with whom he had often smoked a quiet pipe during his visit six years before.

Everywhere in this part of America were signs of the rapid progress that had followed the discovery of gold, and as a consequence the remainder of their journey was accomplished under the most comfortable conditions. A large river steamer carried them up the Yukon to Dawson City. This journey of 1600 miles took nearly a fortnight; but they had little to complain of, for the boat was most luxuriously fitted, the comfort of the passenger having been considered in everything. Dangers which threatened life or limb were things of the past;

the petty annoyances of the everyday tourist were all they had now to bear. Mosquitoes occasionally tormented them, or smoke from forest fires half-blinded them as they moved slowly up stream; but such trials were insignificant.

At Dawson City they were made much of. The town, which had a population of over 30,000, was inhabited by people from every part of the world, all having the same aim—to get rich quickly. And, judging from the prices de Windt had to pay for certain things, the shopkeepers were very badly afflicted with the prevailing mania. A newspaper cost a shilling, a meal in one of the cheapest eating houses five dollars; and de Windt himself was charged fifteen shillings for a pint of French wine! It is interesting to note, as showing the improvements in communication that have been made since the "gold rush", that de Windt, while at Dawson City, sent a message to London and received a reply within seven hours!

A journey by steamer and then by rail over the famous White Pass brought them to the port of Skagway, and from here they were conveyed by coasting steamer to Seattle, where de Windt's faithful Cossack attendant left him, taking passage on a steamer for Yokohama and Vladivostok. The railway journey across the States was begun from San Francisco, and on 25th August, 1902, eight months after leaving Paris, de Windt arrived at New York.

The Unknown Antarctic

Great interest was aroused in this country in March, 1912, by the news that Captain Amundsen, the Norwegian explorer, had reached the South Pole—the goal for which so many men have striven—and was then at Tasmania on his return. The interest was the greater because a British expedition under Captain Scott was also in the Antarctic, and the two famous explorers were rivals in the great race for the South Pole.

Captain Amundsen had made an unexpected landing on the great Antarctic Ice Barrier in February, 1911, having sailed across the Pacific Ocean from South America. He had several advantages over Scott. In the first place he intended to make his great dash in the winter, and so would be in advance of the other expedition. Then, again, he had the use of well-trained dogs instead of ponies, and all the company were thoroughly expert in the use of *skis*. (Lastly, Amundsen's expedition was not a scientific one, and therefore he was not impeded by the necessity of making scientific observations.) His progress, consequently, would be much more rapid than that of Scott.

This was not the first voyage that the latter had made to these almost unknown regions, for he had spent several winters there when he led the *Discovery* expedition of 1902-4. He then attained a good measure of success, reaching the latitude of $82^{\circ} 16' 38''$ S. One of his companions, Lieutenant E. Shackleton, led an expedition in

1907-9 to the Antarctic, and got "Farthest South" to the latitude of $88^{\circ} 23' S$.

For expeditions like these to have any chance of success they must be splendidly equipped with suitable clothing, food supplies, and means of travel.

As regards clothing, both Scott and Shackleton profited by the experience of Dr. Nansen, and practically abandoned furs except for the feet and hands. Thick woollen underclothing, flannel shirts, and suits of heavy blue cloth were worn. Over these were wind and snow-proof overalls. Their outdoor boots, or *finneskoes*, were made of specially prepared reindeer skins. The gloves, also of skin, consisted of one compartment for the thumb and another for the fingers. These were worn over woollen mittens.

The helmets which Scott used were of a fleecy material made of camels' hair. They had flaps coming down all round, and leaving only the cheek, nose, and mouth exposed to the air. Afterwards a device for keeping the wind away from these unprotected parts was worn. It consisted of a kind of blinker, which could be drawn down on either side of the face or on both sides at once. Goggles of coloured glass were also used, as many of the company suffered severely from snow blindness. When on their sledging journeys *grampons* proved of great service. These were steel plates containing spikes for the sole and heel of the boot. They were riveted to a kind of canvas half-boot, which was then put over a *finnesko* and tied securely. The *ski* boots provided for Shackleton's party were specially made. They were large enough to hold the foot, several pairs of socks, and

sennegrass packed round. This was grass of long fibre, which absorbed moisture very easily. It thus prevented the sock from being frozen to the foot and to the boot. The grass was carefully used, for their supply was limited. It was taken out and dried each night when a halt was made.

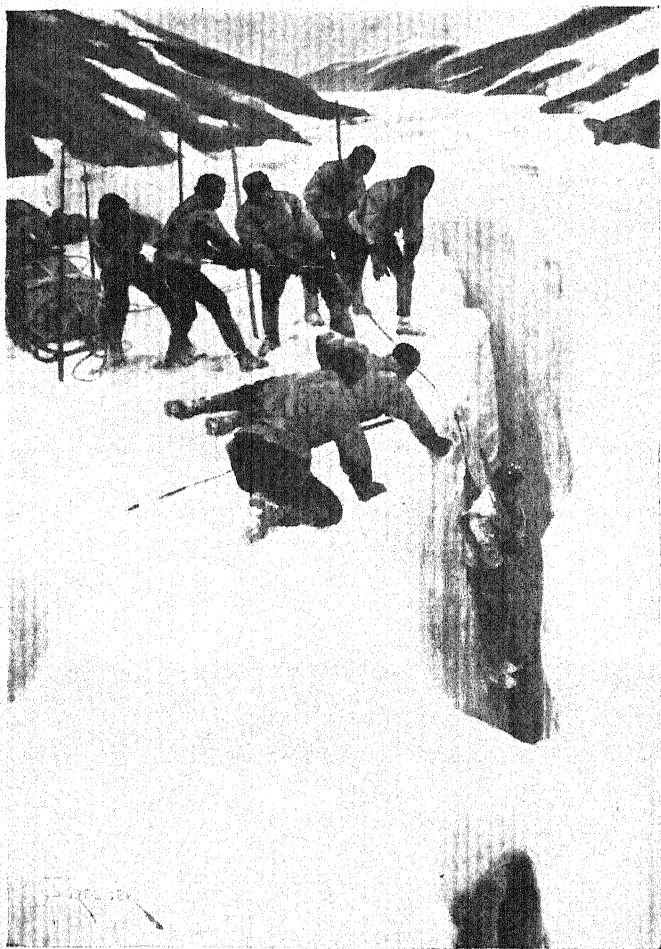
The sleeping bags of both parties were made of reindeer skin, with the hair inside, while their blankets were woven of camels' hair.

Both leaders were particularly careful about the selection of food supplies. Scurvy was the disease formerly dreaded by explorers, but owing to the improvements made in canning and preserving meats and especially vegetables, very few men in these parties suffered from it. Since space on the ships was valuable, it was necessary that foodstuffs should not be of a bulky nature. This meant extreme concentration, and consequently the foods would be less healthful. To remedy this defect a great variety of eatables was taken. None of the articles required prolonged cooking, and were of such a kind as to be eatable uncooked if occasion demanded it.

Scott's party suffered from a lack of vegetables, only tinned potatoes and bottled fruits being carried in any quantity. It was probably due to this that they were attacked by scurvy during the second winter of their stay.

Two of the chief articles used were thick biscuits and carefully prepared pemmican, composed of the finest powdered beef and a good proportion of fat.

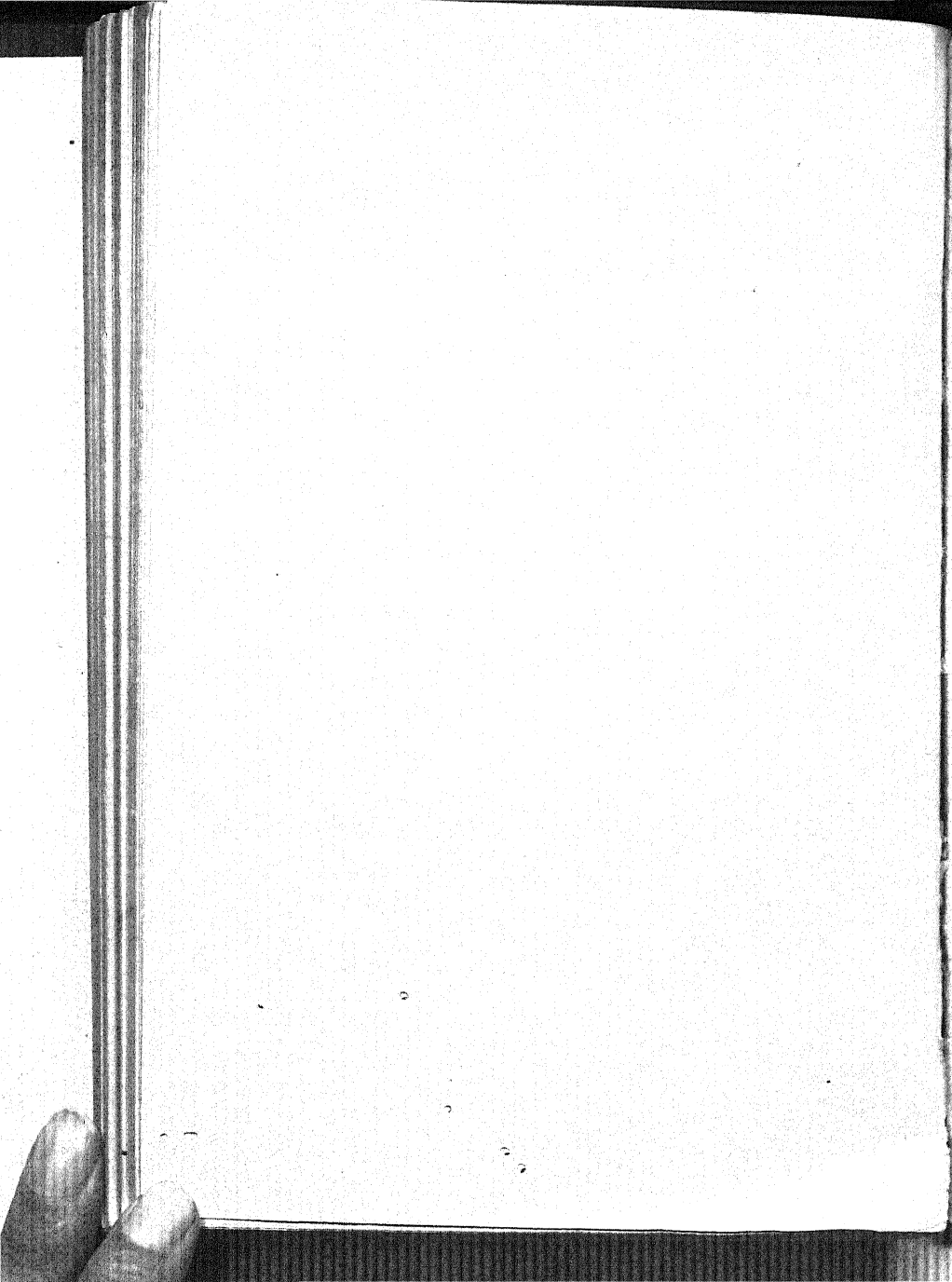
The expeditions also had on board supplies of dried



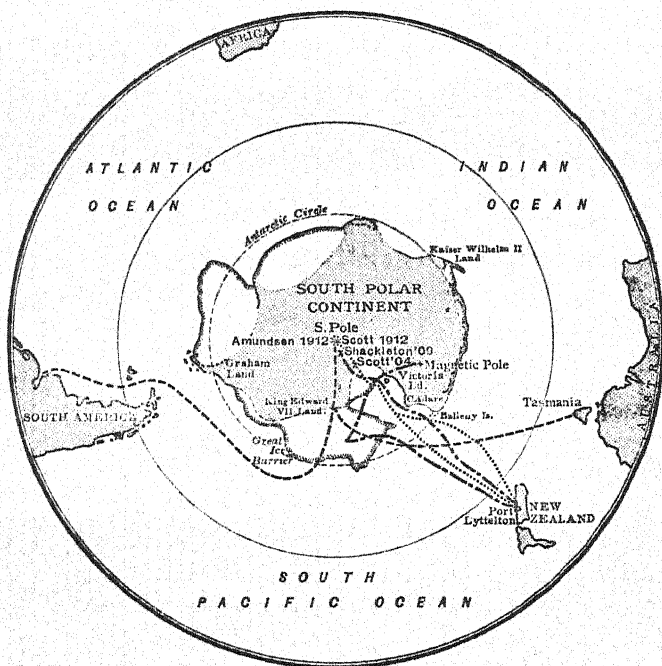
RESCUE OF ONE OF THE PARTY FROM A CREVASSE

Scott and Shackleton Expedition, 1902-4

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milk, butter, cheese, oils, and oatmeal. Then there were food powders of all kinds, extracts of meat, tea, coffee, and chocolate, the last of which proved extremely valuable. Bottled fruits and vegetables, lime juice, tinned



—— Amundsen 1911-12. —— Shackleton 1907-09. Scott { 1902-04.
1911-12.

meats, jams, marmalade, pickles, and, last but not least, sugar made up the chief provisions that the Antarctic explorer carried with him. These were taken with them, but each party also added to their larder by using seals' flesh cooked in various ways. Indeed, the liver or kid-

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neys of the seal, when cooked well, formed an appetizing breakfast dish.

Penguins' eggs, when in season, were a great delicacy; and skuas, a kind of gull, took the place of poultry at many of the dinners. When necessary, less tasty dishes were served up. Even the flesh of the ponies which had died from exhaustion was used by Shackleton while making his great sledging expedition.

The following was the usual fare of Scott's party. Breakfast consisted of porridge, bread and butter, marmalade, jam, and sometimes seals' livers. For dinner they had soup, seal or tinned fruits, jam or fruit tart. What was left over from breakfast and dinner made up their supper. Tea, coffee, or cocoa were the usual beverages. However, when some special occasion was celebrated a much more ambitious menu was provided by the cook. Midwinter Day, 23rd June, with Scott was always marked by a feast which would have done credit to many a first-class restaurant. First came turtle soup, followed by roast mutton and tinned potatoes. Plum pudding, mince pies, jellies, and dry champagne furnished the next course; while dessert consisted of crystallized fruits, almonds, and raisins.

Of course the cooking apparatus was a very important part of the outfit. Shackleton used stoves, burning kerosene oil in a vaporized state. With care, 1 gallon of oil would supply three men for ten days with three hot meals a day. When on a sledging expedition space was so important that everything was reduced in quantity as much as possible. Scott, after careful calculation and

observation, made up the following table as suitable for a man's daily rations when sledging:—

Biscuits ...	12 oz.	Pea flour ...	15 oz.
Oatmeal ...	1.5 "	Cheese ...	20 "
Pemmican ...	7.6 "	Chocolate ...	1.1 "
Red ration ...	1.1 "	Cocoa7 "
Plasmon ...	2.0 "	Sugar ...	3.8 "

This makes a total of 33.3 oz. per day.

Red ration was prepared from a mixture of bacon and peafLOUR.

Means of travel over the ice was a most important part of their equipment. The sledging expeditions arranged in the Antarctic were generally based on experience gained in the Arctic. It was owing to this that they were not so successful as expected, for the conditions were very different. In the Antarctic the temperature was much lower, while the windstorms were far worse. Again, most sledge journeys in the north were done on sea ice, but in the south, land ice, with its hummocks and crevasses, formed a much more difficult path.

Scott used sledges about 11 feet long and weighing between 40 and 50 pounds. The runners were of hickory wood, split with the grain, and about 4 inches wide. This wood was very durable; indeed some of the sledges travelled over 1000 miles across rough, hummocky ice, and were still serviceable. They were drawn by dogs obtained from Siberia, and thus inured to the hardships of Polar lands. These dogs were generally sacrificed to the needs of the expedition, and few returned to civilization. Sledging journeys were arranged so that, as the

loads became lighter, the weaker dogs were killed to furnish food for the others. This method of procedure lessened the amount of food required to be taken, and made it possible to advance farther towards their goal. At a pinch these sledges could be drawn by men. For quicker progress over the ice snowshoes were used, and on their arrival at winter quarters Scott insisted that all his company should practise daily at "ski running". To walk on *skis* is extremely difficult to the beginner, and many were the falls and bruises before the men could use them with any degree of skill. Shackleton's expedition was very well equipped in this respect. He had been with Scott on his previous attempt, and placed very little reliance on dogs. Indeed he never used them on his sledging journeys, preferring small ponies. These he had obtained from Manchuria. Wandering over the great snow-covered plains of that country, they were very hardy, and turned out to be extremely surefooted and plucky. It was mainly due to the splendid endurance of these wiry little animals that Shackleton got as far as he did on his journey Farthest South. His sledges varied in length from 7 to 12 feet, and could be drawn either by men or ponies. He made a number of experiments to find out what was the best weight for the sledges to carry, and came to the conclusion that it was about 700 pounds. The runners were similar to those of Scott's sledges—hickory wood, about 4 inches wide, split with the grain. Some of them were covered with a plate of German silver, but these were not a great success. Shackleton also had with him a motor car of a special pattern, with its wheels so arranged that they ran quite well over the

snow—a strange vehicle to see in those frozen regions. He hoped to meet with plenty of hard, flat surface on which the car would be of great help in hauling heavy loads.

The animal life met with in the Antarctic regions was not nearly so abundant as in the Arctic. Practically the only birds observed by either Scott or Shackleton were petrels, penguins, and skua gulls. Of the different kinds of petrels—snow, Antarctic, giant, and fulmar—the chief were the fulmar and the Antarctic. The fulmar petrel had bluish-grey plumage, and was a close attendant on the explorers when they were out seal hunting. It would seize upon any pieces of blubber lying about, and in its greed for these tempting morsels would often approach so near the men that it might have been easily knocked on the head, or even taken by the hand. The Antarctic petrel, a fine-looking bird with brown-barred wings and head and a white breast, was rarer. The penguins which were seen were the Adelie and the Emperor penguins. The former had black heads and wings with white front, while the latter was a magnificent-looking bird with a black head and a lemon-coloured breast. It was about 4 feet high, and weighed between 80 and 90 pounds. The Adelie penguins were quite numerous, and their nesting places were visited for the sake of the eggs. In the water they swam and dived with amazing activity. On shore, however, from the extremely backward position of their feet, the penguins were only able to stand in an upright position. In this position countless numbers were visible, arranged in regular ranks along the barren shores. When in motion on land they

used their wings in place of another pair of legs, and scuttled along at an amazing pace.

The only whale noticed was the killer-whale, so called because of its attacks on seals. Of the latter, those seen were either the crab-eater or white seal, or the Ross seal, which was a much smaller animal. Scott, however, in January, 1904, came upon the dead body of a sea elephant, the largest of all the seals, and the first one found within the Antarctic circle.

As regards vegetation, the striking difference between that of the north and south polar regions was very apparent. In the former nearly twenty kinds of flowering plants have been found, along with a kind of low stunted willow tree. But a few mosses and lichens were the only forms of vegetation seen by either Scott or Shackleton.

Both explorers followed almost the same route to reach the Ice Barrier, and made their winter quarters in the same spot. Scott's voyage lasted from 1901 until 1904. He sailed from New Zealand at the end of 1901, passed Cape Adare and Cape Crozier, and then slowly made his way westwards along the Ice Barrier. Finding no break, he turned back and made a landing on King Edward VII Land in February, 1902. A balloon, which had been brought, was then inflated, and from a height of 800 feet Scott had a splendid view of the surrounding country. He fixed his headquarters at M'Murdo Sound, from which Mounts Erebus and Terror could be clearly seen. During the winter the company were getting ready for the sledging journeys which were to take place in the spring. For amusements, theatricals were performed, and some first-rate concerts, in which most of the men

took part, were much appreciated. Those with a more serious turn of mind edited a newspaper called the *South Polar Times*. In its pages the doings of the company were recorded, while the artists of the party supplied several fine cartoons, the figures in which were easily recognized by all.

At last, on 2nd November, 1902, the sledging party started. It consisted of Scott, Shackleton, Wilson, and nineteen dogs. From the very beginning their way was a most difficult one, for every mile to the south meant three miles' heavy marching. Most of it was over ground covered with hummocks and crossed by crevasses, the latter being a source of danger to both sledges and men. As they proceeded, depots of food were laid down, a flag-staff or a mark of some kind being put up to indicate the spot. Through November and December the little party struggled on, across icy plains where the wind was so strong that several times their tent was blown over during the night. To fix it again in position when the temperature was -40° was a fearful task, and generally resulted in frostbitten fingers. The dogs, too, were getting exhausted under the heavy strain, and at last, on 30th December, having reached the latitude of $82^{\circ} 16' 38''$ S., Scott decided to turn back. The return journey was worse than the forward one. Shackleton had an attack of scurvy, and finally broke down altogether. This meant extra work for the other two. The dogs became so weak that their journeys each day grew shorter, and at last the animals were allowed to walk, while the two men pulled the sledges, helped now and again by Shackleton. Several times they reached their

food depots when almost starving, and the dogs were killed one by one to furnish food for the others. On their arrival at one depot they were so ravenous that they over-ate, and as a consequence suffered fearful agonies for hours. They at length reached their headquarters in a state of collapse. In the early part of 1903 a relief ship, *The Morning*, arrived, bringing supplies of all kinds. When it departed, in March, Shackleton was aboard. He had never recovered from his illness when sledging, and was obviously unfit to spend another winter in those desolate parts. A lieutenant from the ship took his place.

Another winter was passed at M'Murdo Sound, and this one was as pleasant as the previous one. More theatricals and concerts were given, and hunting parties were arranged in order to get large supplies of seal meat and skua gulls, for Scott had determined to do without tinned meat as much as he possibly could. The ship, during the long, dreary night, was illuminated by brilliant acetylene lamps, which were fixed up in all the sitting-rooms, giving quite an air of warmth and comfort to the vessel. In the early spring more sledging parties were organized, and in September and October three expeditions left the ship. One proceeded to the south, another made its way along the great Ice Barrier, while the third, under Scott himself, crossed the mountains and penetrated some distance into Victoria Land. This was a most difficult journey, and several of his companions were forced to return. Although it was bitterly cold, and several windstorms were encountered, Scott, with only two men left with him, Evans and Lachly,

struggled on until 30th November, when he was compelled to turn back. The return journey was very difficult, for supplies had been running short, and they were forced to go on short rations. This meant a gradual diminution of strength, and the work of pulling the sledge over desolate wastes of snow and ice became daily more burdensome. Several times they had narrow escapes from falling down crevasses, or from being buried in huge snowdrifts. On one occasion they escaped death by a miracle. While making their way across a frozen plateau, Scott and Evans, who were roped together in front, pulling the sledge, suddenly felt themselves falling. It was only through the sledge getting wedged across the top that the two men were saved from falling to the bottom of the crevasse. There they hung, with smooth glistening green walls of ice on each side, and an unknown depth beneath them. Lachly was at the top, but he could do nothing at first to help them. At last Scott noticed a piece of ice projecting from one side of the chasm. By swinging himself backwards and forwards he managed to get his legs fixed round it. With this as a support he freed himself from the rope and succeeded in climbing to the top. The two of them were then able to pull up Evans, who was at his last gasp. The journey began again, and, having fought their way through several terrific snowstorms, the three men reached the ship on Christmas Eve, 1903.

The *Discovery* was frozen fast in the ice, and, as Scott had decided upon a return early in 1904, attempts were made to cut her out. Open water would probably appear about February, but at a distance of some 12

miles from the spot where the *Discovery* was fixed. It was through this mass of ice that a way was to be cut. Great saws were set up, and a body of men were kept hard at work. At the end of several weeks' severe labour the amount cut through was so small that all saw the task was hopeless.

Then two relief ships arrived, one of which was the *Morning*. These had been equipped and sent out by the Government, and the captains had orders to abandon the *Discovery* and to bring back the ship's company with all their belongings. Great was the consternation among Scott's men when this news became known. It was a hard blow to all to think that the fine ship which had served them so well was to be abandoned in these dreary seas. But there was no help for it, and the dismantling of the *Discovery* began. Then the unexpected happened. The ice began to break earlier than usual, and the 12 miles became 10, then 6, until the vessel, helped by the two relief ships, broke away from the ice which had bound it for so long. On 16th February the *Discovery* made its way into clear water. The three vessels then started for New Zealand, and, having called at the Balleny Islands, off Wilkes Land, arrived at Port Lyttelton. The expedition had been on the Antarctic Continent for nearly three years.

One of the most successful Antarctic expeditions which have taken place up to the present was that under the leadership of Lieutenant E. Shackleton in 1907-9. This was not his first experience of the Polar regions, for he had been one of Scott's lieutenants in the expedition of 1902-4. He had accompanied Scott in his great

sledging journey, and had broken down in health, being forced to return home in 1903 in the relief ship. Since then he had quite recovered and had devoted much of his time to the study of the Antarctic regions. When another expedition was being organized, in 1906, he was appointed leader. The ship, the *Nimrod*, was built at London, and after being thoroughly equipped, under Shackleton's personal supervision, sailed to New Zealand. Here, at Port Lyttelton, the final preparations were made. More supplies were taken on board, as well as the Manchurian ponies. These Shackleton intended to use instead of dogs.

Towards the end of 1907 a start was made for the unknown land which surrounds the South Pole. Almost the same route was followed as that taken by Scott in 1902. The *Nimrod* passed Scott Island, rounded Cape Royds, and anchored off Ross Island. The surrounding country was surveyed, and winter quarters were set up at M'Murdo Sound. Here the winter of 1908 was passed. The time was occupied in landing stores from the ship, for the *Nimrod* was to return, leaving them on land, and was to pay them another visit the following year. They found great difficulty in landing the ponies, slings having to be improvised in order to get them out of the ship. The next work was the erection of a dwelling, to serve not only as living quarters but also as a storeroom. Stables were required for the ponies, which had been a great source of trouble even in that little time. Their confinement on board ship had made them very spirited. When once again they felt their feet on firm ground they showed their appreciation by tossing up their heels

and scampering off whenever they got the opportunity. Indeed, one of them narrowly escaped with his life on one of these outbursts. Managing to get loose when on the shore, he dashed on to a piece of ice which extended some little way into the sea. It suddenly broke away and began to float out to sea, and only with great difficulty was the pony rescued. Several of them died within a short time. This was a great blow to Shackleton, for he was relying so much on these ponies. The cause was unknown until a post-mortem was held on one of them. This resulted in a large amount of sand being found in its stomach. The cause of this was a mystery, until one of the crew suggested that the sand on the shore, containing salt from the sea water, had been eaten by the ponies for the sake of the salt.

During the winter several parties set out to explore Mount Erebus and its craters. This prepared the men for the more serious work of the following spring and summer, for to toil up the rugged mountain, through snowdrifts and across deep chasms, was no easy matter, especially when the temperature was many degrees below freezing-point.

All the party spent some of the time in practising on *skis* and snowshoes, for their leader was anxious that the men should be experienced in these matters. This knowledge was necessary on account of the vast snow-covered plateaus, of which most of the Antarctic continent consists. In the attempt to reach the South Pole these would have to be crossed, and speed above all was the thing required. At last the long winter ended, and then sledging expeditions were organized. Three parties

started: one to advance southwards as far as possible, another to the South Magnetic Pole, while the third was to make its way to the west of McMurdo Sound, exploring the mountain ranges and taking observations of the great Ice Barrier. The first one was under the leadership of Shackleton himself; the others were headed by two of his lieutenants.

Shackleton started in November, 1908. He had with him several companions, and the sledges were drawn by all the ponies he had left. They started in the highest spirits, and for the first week or two made fine progress, leaving food depots at several spots. Then their troubles began. Several of the ponies fell lame; they were delayed some days by terrific storms, through which it was impossible to make their way; and their food ran short. Still they struggled on across a vast plateau, 11,000 feet high, without a thing to be seen except a dreary white waste. Scarcely a hill or hummock broke the monotony of the scene, and as far as the eye could see, this white carpet spread out in front of them. The ponies, one by one, began to drop exhausted, and finally several were killed to furnish food for the explorers. Christmas Day, 1908, was spent amidst surroundings desolate in the extreme, and their Christmas fare consisted of soup made from pony flesh, and a little chocolate.

At last, in January, 1909, having reached "Farthest South", $88^{\circ} 23' S.$, only about 100 miles from the South Pole, they were forced to turn back. It was time. The ponies were becoming weaker and weaker, their own strength was failing, and their chief food supply lay in the flesh of those ponies killed when unable to keep up

with the sledges. The journey back over a snowfield which seemed to have no end was a terrible one. Their last pony, together with the sledges it was pulling, fell down a crevasse, and vanished forever. They themselves had several narrow escapes, and it was with thankfulness that their headquarters were reached, and they were able to satisfy the pangs of hunger.

The other parties had been quite successful. The country to the west had been explored, while the expedition to Victoria Land had reached the Magnetic Pole. The *Nimrod* had already arrived in the bay, and preparations were begun for the departure. The journey home was a quick one, and on 25th March, 1909, the *Nimrod* sailed into the harbour of Port Lyttelton. The expedition had been away about eighteen months, and had accomplished one of the most successful of all the Antarctic voyages.

You have read at the beginning of this chapter that the South Pole has been reached by Captain Amundsen. The brave and daring Norwegian explorer gained the coveted goal on 14th December, 1911. But the story of Antarctic exploration cannot be closed without mention being made of the glorious but tragic expedition of 1910-12 led by Captain Scott. It was a glorious expedition by reason of the stirring heroism of its leaders, as well as for the success that was achieved. But not one of the five who reached the Pole returned alive to reap the reward of that success.

The *Terra Nova*, provisioned for three years, left New Zealand on 29th November, 1910. Early in January winter quarters were established at Cape Evans, near

Mount Erebus, and 144 miles from here, across the Ross Ice Barrier, "One-ton Depot" was set up and provisioned. Other depots, each containing one week's rations for every returning unit, were formed at intervals of 65 miles as they advanced towards the Beardmore Glacier. The 87th parallel was crossed on New-Year's Eve, 1911, and on 4th January Captain Scott bade "goodbye" to the last supporting party, and, accompanied by Dr. Wilson, Lieutenant Bowers, Captain Oates, and Petty-Officer Evans, set out for the Pole. The distance was 145 miles, and they covered it in two weeks, reaching the South Pole on 17th January, 1912. But they were not the first in the race: Amundsen had forestalled them by five weeks!

The return journey was begun on 19th January. Evans was the first to fail, and on 17th February, when they were at the foot of the Beardmore Glacier, he died. The four who were left fought on against awful odds. The cold was intense, and on some marches they accomplished no more than 3 miles. Captain Oates suffered terribly from frost-bite. On the morning of 17th March, after a restless sleep, from which he had expressed the hope that he would never wake, he walked out of the tent into the blinding blizzard. He gave his life as a hero, hoping that without him to hinder them the others might yet win through.

They struggled on till 21st March. Only 11 miles lay between them and "One-ton Depot". But a fierce blizzard kept them prisoners; and in that camp, so near to the safety of their last depot, the end came. On 12th November, 1912, their bodies were discovered, and over

the tent a cairn and cross were erected to their memory. Near by a similar memorial was built in memory of Captain Oates, who had walked out from the tent to a hero's death. In the words of the gallant leader himself: "It was the act of a brave man and an English gentleman".